Residential Budget-Based Water Allotment Demonstration Program

March 2005 – February 2006

Report

City of Santa Fe
Water Division

Residential Budget-Based Water Allotment Demonstration Program Report

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Introduction

Limitations in Santa Fe's ability to meet existing water demands became evident to the community in the droughts experienced in 1996 and again in 2000 through current day. With the existing supply infrastructure and water rights, Santa Fe remains vulnerable during similar or more extended drought conditions. The City of Santa Fe implemented a Residential Budget-Based Water Allotment rate structure as part of a Demonstration Program to see whether it was responsive to perceived needs and able to provide the City the means to implement measures for controlling water use in response to limited water resources.

The intent of the budget-based water allotment rate structure was to create an incentive to conserve water that is built into a water-pricing policy that can be easily modified according to the severity of a water crisis. It was decided that a budget-based water allotment would apply a standard to each customer's account to determine a maximum required usage. Customers could get the water they need at a low base rate. When water is wasted which is, by definition, when customers water usage exceeds their allotment, the customer is assessed a surcharge or penalty and "billed at a penalty rate." In this budget-based structure, type of water usage, irrigation, and number of persons per household were taken into account in determining a water allotment. When landscape became part of the equation, its need changes based on weather conditions. Consequently, each account's water allotment changes by month to meet those conditions. This targeted rate structure was intended to create monthly feedback to water customers regarding their water use and convey the financial incentives that help reduce overall water demand, stabilize revenue, reward customer efficiency, and penalize water waste.

A primary purpose of the budget-based water allotment was to serve as an information tool, to tell the customer that a problem has occurred, such as a leak or over-watering. A water allotment rate structure was perceived as a viable rate structure for determining customer efficiency and true low water users. Thus allowing for rewards (i.e., lower rates, personal choice etc.,) where other rate structures with tiers are perceived to benefit small families and penalize large families.

The concept of a budget-based water allotment was based on the practice of advising people how much water they could use, rather than telling them how they must use it. Water allotments would give consumers more options and personal choice, while intending to provide an effective way to conserve water. Rather than attempting to regulate or ban specific water use, the water allotment technique would leave the determination in the hands of the rate-paying water user. This approach was designed to eliminate the need for landscape ordinances, debatable plant lists, as well as the potential for enforcement practices and "water police."

The Demonstration Program was designed to introduce the participants to the Water Allocation concept by providing charts that show the targeted water use baseline for each month based on the number of persons per household. The water user could compare their month's water use to the baseline water use from the chart. A flag should go off when a customer exceeds the baseline. Each month the water user should become more familiar with their water use and better understand the "bell shape curve" that is associated with it.

The implementation of the Residential Budget-Based Water Allotment Demonstration Program (Demonstration Program) allowed the City of Santa Fe to collect information to help determine the feasibility of implementing a City wide residential budget-based water allotment rate structure in the future.

How does a Budget-based Water Allotment Compare?

Current Rate Structure	Budget-Based Water Allotment
Large families have the same allotment before incurring penalties as small families, benefiting small families	Large families are allotted the indoor portion of their budget based on household occupancy before incurring penalties
Small families have less incentive to save water in the winter when the base allotment is the same as summer months	Lower amounts are allotted in the winter when irrigation water is not needed to create more incentive to save water
Water use restrictions	Personal choice with a budget
High water use surcharges, same for everyone	High water use surcharges, based on household occupancy
Leaks can go undetected for months and throughout the year	A flag should go off when a water user exceeds their allotment to help pinpoint water waste/leaks with each monthly bill
All households get the same allotment before incurring penalties, thus there is no indication of how much water households with different number of occupants should be using	The educational component provides a year round water use baseline, based on the different number of occupants in the household
No adjustments for families with special medical needs	Adjustments for medical, health and safety needs

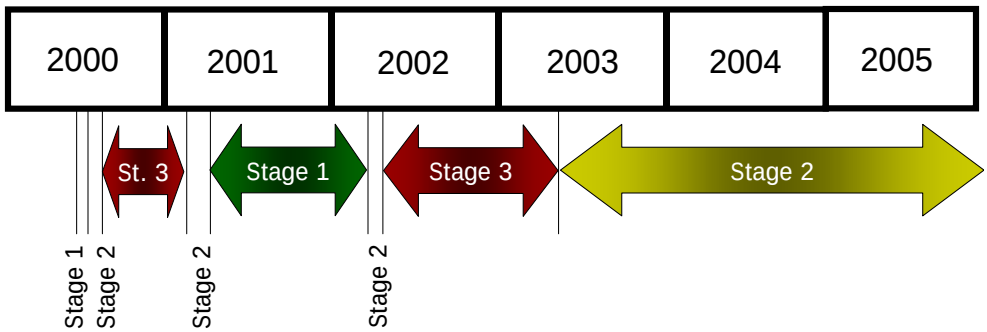
Allotment Calculation

The Budget-Based Water Allotment Rate Structure was designed to allow a quality of life for the community while staying within the constraints of the City's water supplies.

Residential customers typically have a mix of indoor and outdoor water requirements. The water allotments were calculated by adding each of these two requirements together. Indoor residential water use is generally consistent and depends almost entirely on the number of people living in the home. Outdoor water use is not consistent and is based on changing weather. The purpose of this targeted conservation baseline was to provide the city the means for controlling water year round and in response to water-system-related emergencies. In the event of a foreseeable water emergency such as extended drought conditions, when the city of Santa Fe Water Utility would not be able to meet all of the water demands of its customers, the water use base is reduced.

During the test period March 2005 through February 2006, the City remained in a Stage 2 Water Shortage Emergency; accordingly, the water use baseline did not change.

Water Shortage Emergency Stages



Indoor Allocation

The household or indoor water allocation is defined as the amount of water that a household uses each month or billing cycle. The allocation was based on the number of residents within a household multiplied by a standard water use; gallons per person per day (gpd) then multiplied by the number of days in a month or billing cycle. The indoor water allocation standard used for the Demonstration Program was calculated based on the American Water Works Association standards (www.awwa.com). The indoor water allocation established for a non-stage period was 55 gpd and reduced 10% for Stage 2 at 50 gpd.

Outdoor Allocation

The landscape or outdoor water allocation is defined as the amount of water that a residential landscape is allocated to use each month or billing cycle. The City of Santa Fe's Landscape Site Design Ordinance SFCC-1987 Chapter 14-8.4 does not allow an oasis area in excess of 1,000 square feet. The allocation was based on a small to mid-sized landscaped area of 3,000 square feet per household. This allocation based on 3,000 square feet of landscaping was calculated including a 1,000 square foot "oasis" landscape area using 100% evapotranspiration (ET) replacement and 2,000 square feet of xeric landscape requiring 50% ET replacement. This is

equivalent to 2,000 square feet at 100% ET. This standard was applied across the board to all households whether a lot was larger or smaller. Water Harvesting and the use of gray water was an alternative to water larger landscapes when the water user could not meet their budget in the summer months.

Landscape water needs vary throughout the year. Plant water requirements were derived by measuring the ET rate as it applies to a specific plant species. ET is defined as the amount of water lost to the atmosphere by the combination of evaporation and transpiration of the plants growing in the soil. The rate of ET is affected by weather conditions such as temperature, humidity and wind that determine total soil moisture deficit. These measurements were taken from various weather sites and are expressed in terms of a depth of water per unit or time, such as inches per month. The ET data used for the Demonstration Program was based on a thirty-year annual average (1930-1961) of collected data from the Toro Company, "Rainfall-Evapotranspiration Data," form, #490-1358. The landscape allotment formula is as follow:

WA + (ET x A) / Cu

WA = water allotment (per month)
ET = evapotranspiration (in/month)
A = area of landscape (sq ft)
Cu = conversion factor (1.6043)

Landscape Allotment

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Non-stage	0	0	700	2,000	3,600	5,700	5,700	5,700	3,600	2,000	700	0
Stage 2	0	0	600	1600	2900	4600	4600	4600	2900	1600	600	0

Stage 2 Water Shortage Emergency Conservation Limit (indoor and outdoor combined) used for the Demonstration Program

Number of Occupants	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1,500	1,500	2,100	3,100	4,400	6,100	6,100	6,100	4,400	3,100	2,100	1,500
2	3,000	3,000	3,600	4,600	5,900	7,600	7,600	7,600	5,900	4,600	3,600	3,000
3	4,500	4,500	5,100	6,100	7,400	9,100	9,100	9,100	7,400	6,100	5,100	4,500
4	5,900	5,900	6,500	7,500	8,800	10,500	10,500	10,500	8,800	7,500	6,500	5,900
5	7,500	7,500	8,100	9,100	10,400	12,100	12,100	12,100	10,400	9,100	8,100	7,500
6	8,900	8,900	9,500	10,500	11,800	13,500	13,500	13,500	11,800	10,500	9,500	8,900
7	10,400	10,400	11,000	12,000	13,300	15,000	15,000	15,000	13,300	12,000	11,000	10,400
8	11,900	11,900	12,500	13,500	14,800	16,500	16,500	16,500	14,800	13,500	12,500	11,900

Surcharges/Penalties

Demonstration Program participants were charged a conservation surcharge on the amount of water used above the conservation baseline. Three tiers of surcharges were established. Surcharges established under the Declared Stage 2 Water Emergency were higher than the year-round. In a non-stage period the first tier would be $2.50 per 1,000 gallons for the water used above the baseline allocation. In Stage 2 tier 1 surcharges were $10.00 per 1,000 gallons above the baseline allocation.

The second tier (High Use Surcharge) was assessed on participants who used 5,000 gallons or more over the baseline. This high use surcharge for the water used above the baseline allocation plus 5,000 gallons was in addition to tier 1 surcharges. The high use surcharge was intended to encourage high water users to take substantive measures to decrease their outdoor watering needs and/or repair leaks. In a non-stage period the second tier would be $2.50 per 1,000 gallons. In Stage 2 tier 2 surcharges were $10.00 per 1,000 gallons for the water used above the baseline allocation plus 5,000 gallons.

The third tier (Excessive Use Surcharge) was assessed on participants who used 10,000 gallons or more over the baseline. This excessive use surcharge for the water used above the baseline allocation plus 10,000 gallons was in addition to tier 1 and 2 surcharges. In a non-stage period the third tier would be $5.00 per 1,000 gallons. In Stage 2 tier 3 surcharges were $10.00 per 1,000 gallons for the water used above the baseline allocation plus 10,000 gallons.

Demonstration Program Guidelines

Participation

After approval by the City Council, newspaper advertisements (Appendix A contains the text used for the ads) were placed in the Journal North and Santa Fe New Mexican, two Sundays and two Mondays, June 20, 21, 27 and 28 to seek volunteers to participate in the Demonstration Program. The size of the advertisement in the Journal North was 3" x 6" with no color for $1,022.04. The size of the advertisement in the Santa Fe New Mexican was two columns x 4" with color for $930.74. The total cost of advertising was $1,952.78.

An 8 ½" x 11" random direct mailer (Appendix A) was sent out to 1,000 City of Santa Fe water customers, 250 in each of the four billing cycles. An additional 1,000 copies were printed and distributed via water conservation literature racks located throughout the City. The printing cost for the 2,000 fliers was $612.35. In addition, letters were sent out inviting City of Santa Fe Councilors, City Manager and Mayor to participate in the Demonstration Program.

Participation in the Demonstration Program was voluntary. It was mandatory that the participants remain in the program for the full test period of one year. The size of the test group was limited to one hundred participants for monitoring and tracking of water use. Only single-family residential customers were allowed to participate and were required to sign an application (Appendix A) that includes the number of persons in the household.

An objective for the program was to establish an accurate cross section of the community for the test period. Seventy-nine volunteers signed up for the project. Household participation for each cycle is shown below.

Demonstration Program Participation

PPH	Goal	Actual	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Total
1	36.40%	25.32%	5	5	7	3	**20**
2	33.50%	44.30%	9	7	16	3	**35**
3	14.00%	8.86%	3	3	1	0	**7**
4	9.80%	12.66%	3	2	4	1	**10**
5	3.90%	5.06%	0	1	3	0	**4**
6	1.50%	0%	0	0	0	0	**0**
7 & up	0.90%	3.80%	0	1	1	1	**3**
							79

The default water allotment baseline was a two-person household. One and two-person households comprise an estimated 70% of residential water customers in the City of Santa Fe using information from the 2000 census. The intent of providing a two-person allotment to one-person households was to limit the number of adjustments that customer service would have to process if the City went to a City wide budget-based water allotment rate structure. If the household had more than two permanent residents or special needs, the participant was required to fill out a request for an increased water allotment (Appendix A) and submit proof of

permanent residency for each person in the household. Only those participants who met one of the adjustment criteria listed below qualified for an adjustment to their Conservation Baseline.

- Participants where there are three or more permanent residents
- Participants where there is a medical need that demonstrates an increase in water use for health and safety reasons
- Licensed care facility (in a residential dwelling unit)

Verifications were handled on a case-by-case basis. Twenty-four out of the seventy-nine participants that met the adjustment criteria submitted proof to the Water Conservation Office for verification. A valid driver's license with a current address, birth certificate, insurance card showing dependents, lease agreements, signed copies of income tax returns, or legal documents approved by the Water Conservation Office were required for each permanent resident.

- The most common submitted form of proof from participants was driver's licenses, insurance cards and tax returns.

If there was a change in the household after the Demonstration Program began, the participant was required to submit a request for an increased water allotment and submit proof of permanent residency for each person in the household to the Water Conservation Office. Once a valid request was received for an increase or decrease in the number of persons in the household, a work order was created by customer service staff to deactivate the existing number of persons in the household. Then another work order was created to activate the new number of persons per household. The effective date of the application once granted, was the date it was received by the Water Division. An increased allotment was for the entire billing period in which the appeal was received. However, there were not retroactive adjustments to surcharges (for previous months) if the customer failed to submit their appeal promptly.

- One request for a change in the number of persons per household was received during the test period. No retroactive adjustments were made to the account; the changes were effective on the next billing cycle.

Penalty for Falsifying Verification Document

If the information supplied by a participant was determined to be inaccurate, the participant would be subject to all applicable surcharges and penalties.

- We did not experience any problems with the information supplied by the participants. An objective of this Demonstration Program was to identify the types of proof the participants submitted.

Meter Reads

Before the start of the Demonstration Program, the Transmission & Distribution section replaced all participant's water meters. In addition, the Water Conservation Office installed Fireflies manufactured by Datamatic on each participant's meter to provide accuracy of meter reads and the ability to identify leaks and problems that may arise during the test period. A Firefly is a meter interface unit installed on water meters that allows electronic meter reading and integrated usage profiling.

- We did not experience any problems with the new meters and Fireflies or the accuracy of meter reads during the test period. Re-reads following high consumption investigations showed the reads to be accurate.

The equipment purchased for the electronic meter reads included one hundred Firefly units, software, handheld unit for programming Fireflies, and laptop for extracting and graphing water use. The total cost for this equipment was $22,917.00.

Public Relations

Prior to the start date a public information meeting was held on February 24, 2005 from 6:00 pm to 7:00 pm at the Genoveva Chavez Community Center Community Room. Twenty participants attended the meeting. Staff from the City's Water Conservation Office and Billing section presented a short overview of the Demonstration Program, provided a Q&A sheet (Appendix A) and was available to answer questions.

Signs (Appendix A) were provided and placed in front yards to inform neighbors and interested parties that the residence is participating in the program. City residents could call the Water Conservation Office with questions and were informed of the purpose of the Demonstration Program and that participants do not have to adhere to water day restrictions, but instead follow a strict water budget. The signs were 18" x 24" mounted on metal stands at a cost of $4,570.00. The Water Conservation Office collected the signs at the end of the program.

Initially phone calls for the project were directed to a specific phone number at the Water Conservation Office for the purpose of tracking the quantity of calls and type of question/comments. Participants in the Demonstration Program must have missed the memo. During the test period the dedicated phone line remained quiet while participants called customer service, the water conservation information hot line or other direct lines. This did not allow for tracking of the calls. The survey that was sent out at the end of the project included questions asking for information of participants that contacted the Water Division with questions or requested services and literature.

- Respondents indicated in the survey that 32% contacted the Water Division/Water Conservation Office with questions concerning the Demonstration Program. Some examples are; concerns or questions about the yard signs, the start up date, allotments, the public meeting, and other related questions.

- Respondents also indicated in the survey that 15% contacted the Water Division's customer service with questions concerning their water bill and 11% contacted the Water Division's customer service with concerns about their water use. Generally contacts of this nature concern a high water bill, both monetary and gallons which are usually caused by leaks. 19% of the respondents did indicate that they experienced leaks during the test period.

A key element of the Demonstration Program was to not offer any special treatment or services to the participants before or during the test period. With the implementation of budget-based water allotments and an aggressive rate structure, some customers inevitably incurred penalties. Some of those customers required support in the form of education, customer service, materials, site visits/audits, and possibly other means of assistance. Although the penalty charges alone

were motivation for customers to find and fix their problem, they still needed information, recommendations, techniques, and resources to help them save water and keep their bills low.

The same water conservation services were available as for all customers including free site visits/retrofit surveys to detect leaks, retrofit showerheads and aerators, and assistance with outdoor irrigation and landscape by providing recommendations in an effort to help customers reduce their water use and stay within their target. Both the Water Conservation Office and the customer work toward the same goal: low water bills and reduced water use.

- Respondents indicated in the survey that 65% were aware or our water conservation assistance.

- Two participants requested and received a retrofit survey to assist them with their water use during the test period and three participants requested leak detection help. In addition, thirteen participants requested literature from the Water Conservation Office.

Cost of Demonstration Program

The budget for the Demonstration Program was $62,580. The expenditures are as follow:

• Newspaper advertisements		1,952.78
• Direct mailer		612.35
• Postage (estimated)		625.00
• Front yard signs		4,570.00
• Software for Fireflies		1,995.00
• Roadrunner handheld for Fireflies		4,502.00
• Fireflies and PPU		12,580.00
• Laptop		3,840.00
• Survey software		166.95
• ITT staff OT to setup billing		23,493.00
	Total	$54,337.08

Objectives of Project

Test Billing System

An independent contractor was initially expected to set up a test billing environment for the budget-based water allotment rate structure that was separate from our production billing system. After the Demonstration Program was approved to move forward, the contractor was no longer available and instead the ITT systems & programming manager fulfilled the contract to set up the test billing environment. Differences between the current rate structure and the new rate structure for the Demonstration Program bill were debited or credited on the subsequent month's bill. The purpose of the test was to determine if the billing system could be programmed to handle the following parameters of the budget-based water allotments.

- Accommodate number of persons per household with a default of two
- Allow for a three-tier surcharge rate for excess water use
- Automatically adjust base water use on a monthly basis
- Automatically prorate base for meter reads in the middle of the month

The billing system is complex and any modification could cause other issues to arise. The setup for the water budget billing was immense with over five hundred bill items. It took three months and the programmer set up, tested, and put into production Stage 2 at a cost of $23,493.00. Bill items for only one stage were set up. It is possible that an additional 1,500 bill items would be required to set this program up for all drought stages. The Utility Billing Director believes that maintaining a system with this many bill items would be untenable.

Detect Problems

Inevitably, according to Murphy's Law there will be problems. The billing system was tested prior to starting the Demonstration Program, but eventually problems did show up. Some examples are:

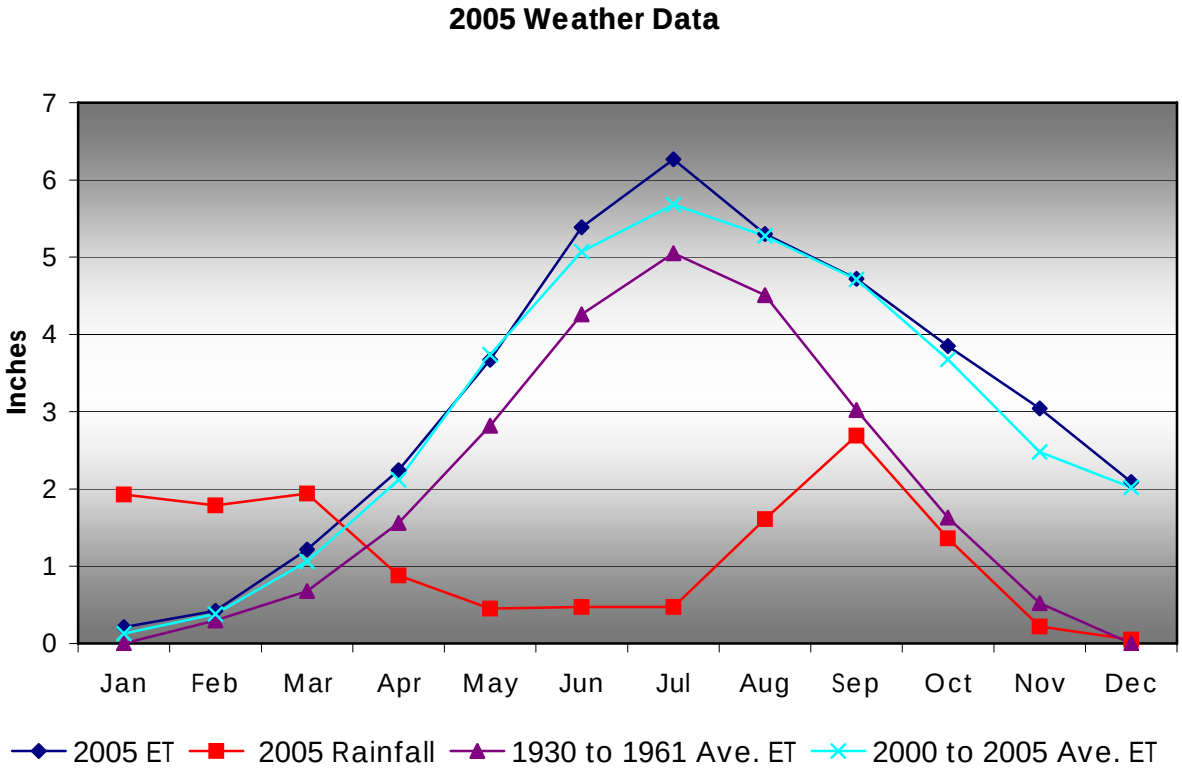
A. The billing system was able to accommodate number of persons per household and incorporate the tiered surcharges. The billing system initially was able to account for the changing base water allocation each month but not able to automatically prorate bills for meter reads in the middle of the month. In other words, meters are read other times of a given month instead of the first or the end of the month. Therefore the system needs to be able to accommodate for partial water use in each of two adjoining months due to different allocations each month. Prorating is a very important component of the budget-based water allotment rate structure. Additional programming will be required to accomplish this large task (i.e., separate bill item tables for each of the four billing cycles based on the time of the month the meter is read).

   An estimate to setup and test the water budget billing of all three water stages with four billing cycles for each stage is four to six months. The estimated cost is $75,000.00.

B. The billing date is generally one week after the meter read and certain billing cycles picked up the wrong months base use. A possible solution to this problem is to incorporate the billing date into separate bill item tables for each cycle as mentioned above.

C. 2005 proved to be a hotter and drier year than the thirty-year average (1930-1961) evapotranspiration data used for the Demonstration Program. In addition, Santa Fe normally

receives most of its precipitation in the winter months. During the Demonstration Program test period November 2005 through February 2006 Santa Fe did not receive any significant precipitation, which prompted outdoor watering during this period. A possible solution to address this issue would be to use past years as an average as shown in the graph below comparing the two averages. See Appendix B for more charts of weather data 2000 through 2005 that demonstrate the changes in weather. The first chart shows the monthly average temperatures. The remaining charts show evapotranspiration, rainfall and the difference between the two. In addition, the 2000-2005 average ET is added for comparison. The difference line on the charts represents an accurate adjustment to the ET bell curve that should be seen in actual outdoor water graphs assuming that the water manager waters less during and after rain events.



D. Water bills with thirty-two or more days in the billing period were a problem. For this project the billing system was set up to budget water monthly and bill monthly. As a result if an account was not billed for a month due to a cancel/rebill issue or other account exception, the billing is taking the consumption for the reads that were not billed and using the water budget table for the current month being billed only. The current system has no way for the system to either combine water budget tables for multiple month billing of bill multiple values based upon water budget values per month. The possible solutions are: 1) Identifying accounts that will be billed for thirty-two or more days and billing them individually. This would be extremely time consuming and increase ratio of errors. 2) The other solution would be to customize the billing program. This solution is not recommended by the systems & programming manager. The billing program is an extremely complex program, which are over one hundred pages of calculations. The current program is stable and reliable as it is. It would be extremely difficult to write technical specifications to ensure the billing calculations are correct because there are so many variables.

An estimate for customizing billing for this rebill issue is $16,650.00.

E. A review of the accounts that were billed during the demonstration project did not prove to be a good sample as the customer rarely tested the conditions set forth in the residential budget-based water allotment documentation. They must all be conservation minded! Billing encountered approximately fifty occurrences where thirteen customers tested the new bill items. Many of the new bill items were never tested.

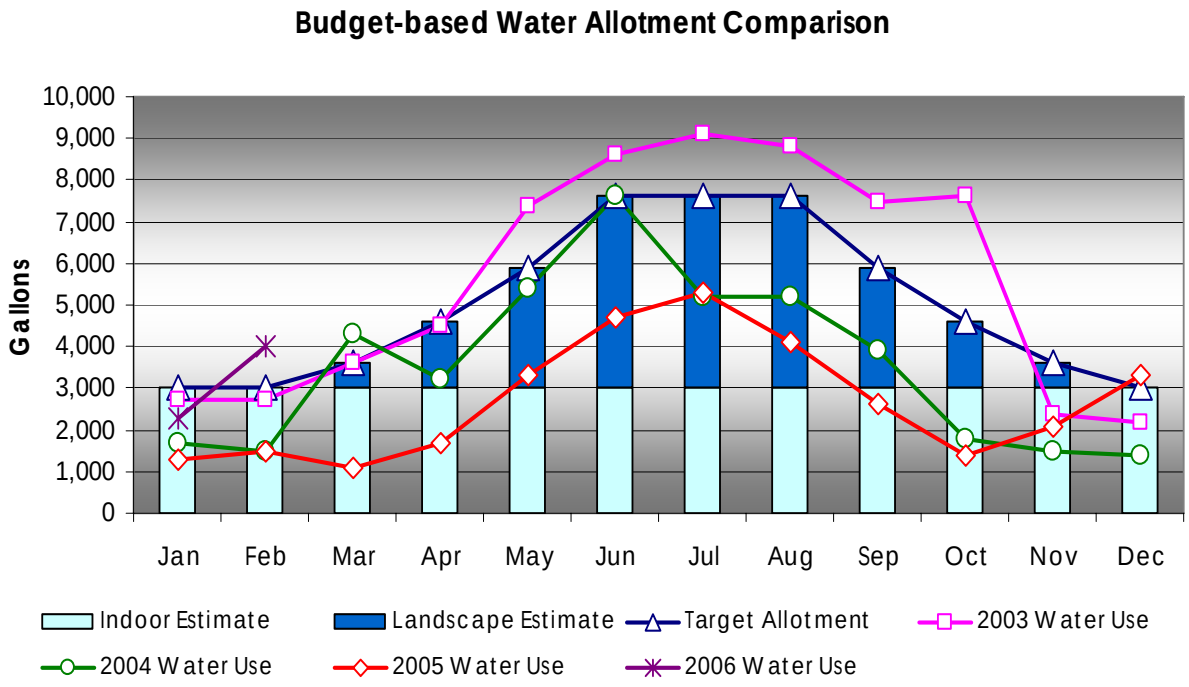
F. As mentioned above the Demonstration Program was set up in a test environment where participants received their regular water bill. A live budget-based water allotment rate structure would present challenges with the printing of a new bill.

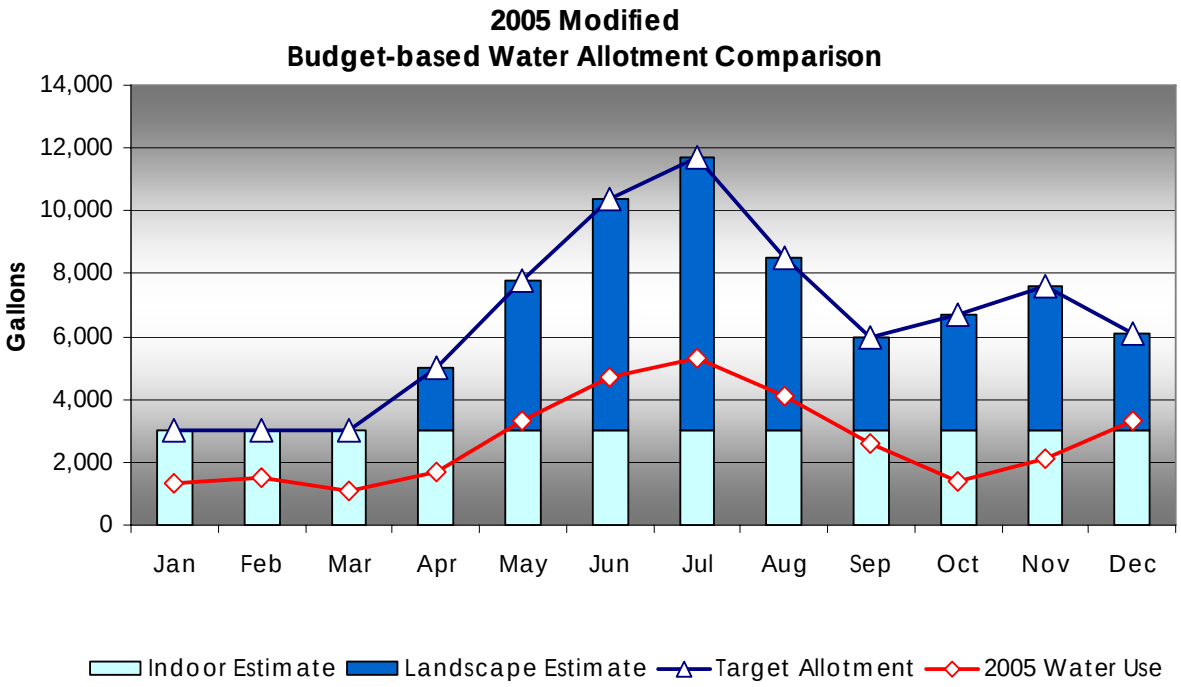
An estimate for customizing the water bill depending on design changes is $30,000.00.

Track Water Use

Water use histories for 2003 and 2004 have been compiled for comparison to the water use during the test period. The water use of 2003 and 2004 were averaged and used as a base to track water use. As mentioned earlier Santa Fe was in a Stage 2 water shortage emergency during the test period and also during 2003 and 2004 which allowed a fair comparison of water use.

Water use was graphed as shown below for each participant showing 2003 through current and the target water use based on the combined person per household indoor water use and outdoor landscape water use that was used for the Demonstration Program. A second graph was developed to compare the participant's water use to the difference of the 2000 through 2005 average ET and 2005 rainfall. If the water user did a good job of following the changing weather related to their outdoor watering, their water use should mirror the difference line on the chart. A graph with water use history was sent to each participant at the end of the Demonstration Program.

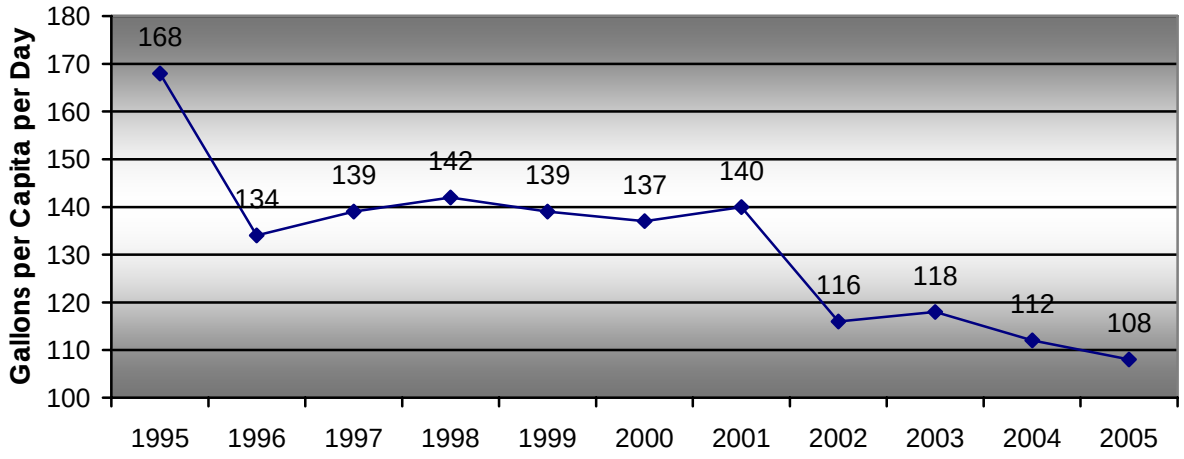




Determine Water Savings

Indoor water demand in Santa Fe accounts for approximately 75% of the total water used. Landscapes use approximately 25% of total water, with a peak of 40% coming in the summer period. Residential water users consume approximately 55% of Santa Fe's water use. The top 1000 residential water users (less than 5% of all residential accounts) use approximately 23% of the residential water.

While Santa Fe remained in Stage 2, the Demonstration Program presented a challenge with respect to water savings. Santa Fe is already a community with a low per capita water use. The average daily water demand dropped from 140 gallons per capita daily (gpcd) in 2001 to 112 gpcd in 2004. Demand for 2004 was the lowest since 1988, and the City's per capita water usage numbers were the lowest ever recorded. (Total production includes deliveries to Las Campanas and Santa Fe County, who are wholesale water customers.) The 2004 figure of 112 in the chart below represents a decline of 7 gpcd from the previous year and the 2005 figure of 108 shows an additional decline of 4 gpcd.



When the gpcd is calculated using only residential water use, and not all uses within the service area, the figure obtained is 52.5 gallons per person per day. However, due to the current water billing structure, certain residential water use is billed as commercial. For example, apartment complexes within the City may be classified as either multifamily or small or large commercial, and are therefore not included in the gpcd value for residential water use.

Budget-based water allotments were expected to retain savings experienced in Stage 2 and Stage 3 water restrictions while allowing additional savings in the Spring and Fall when over watering is a common problem. In addition, budget-based water allotments should produce year round water savings in non-drought years and help to reduce waste from leaks. Fourteen addresses were not used in the following water use calculations due to incomplete water use histories.

The first quarter of the Demonstration Program March through May 2005, showed a reduction in water use of 21.61% compared to a baseline 2003 and 2004 average. The 2003-2004 average was 754,650 gallons and the 2005 use was 591,600 gallons. This period represents the incline of the bell curve at the beginning of the watering season that typically should have potential for water savings.

During this first quarter Santa Fe experienced a very wet March and then experienced a dry April and May. In 2004 Santa Fe experienced a wet April and a dry May. The total precipitation for this period in 2005 was 3.27 inches as compared to the 2003-2004 averages of 1.94 inches. The first four months in 2005 received 6.54 inches of precipitation, almost half of the year's total. This shows in the water use reduction for the first quarter of the Demonstration Program.

The second quarter June through August 2005, showed an increase in water use of 4.53% compared to a baseline 2003 and 2004 average. The 2003-2004 average was 979,850 gallons and the 2005 use was 1,024,200 gallons. This period represents the tip of the bell curve at the height of the watering season and was not expected to show much of a difference in water use.

During this second quarter Santa Fe experienced a very dry summer with precipitation in August. In 2004 Santa Fe experienced a wetter summer with precipitation in July and August. The total precipitation for this period in 2005 was 2.55 inches as compared to the 2003-2004 averages of 2.96 inches. This amount was below the average and might explain a portion of the increase in water use.

The third quarter September through November 2005, showed an increase in water use of 3.34% compared to a baseline 2003 and 2004 average. The 2003-2004 average was 601,400 gallons and the 2005 use was 621,500 gallons. This period represents the decline of the bell curve at the end of the watering season and similar to the incline should have potential for water savings.

During this third quarter Santa Fe experienced a wet September drying out into October and November. In 2004 Santa Fe experienced a wet period with precipitation in all three months. The total precipitation for this period in 2005 was 4.27 inches as compared to the 2003-2004 averages of 3.77 inches. This amount was above the average and typically should show have helped reduce water use during this period.

The Fourth quarter December 2005 through February 2006, showed an increase in water use of 7.81% compared to a baseline 2003 and 2004 average. The 2003-2004 average was 535,000 gallons and the 2005-2006 use was 576,800 gallons. This period represents the winter months and was not expected to show much of a difference in water use.

During this fourth quarter Santa Fe experienced an unusually dry winter. The total precipitation for this period in 2005-2006 was .05 inches as compared to the 2004-2005 averages of 2.63. This amount was well below the average and might explain a portion of the increase in water use.

The total water use of the Demonstration Program March 2005 through February 2006 was 2,814,100 gallons. The total water use average March 2003 through February 2005 was 2,870,900 gallons. This represents a difference of 56,800 gallons and an overall water use reduction of 1.98%.

A greater water savings was anticipated for the Demonstration Period expecting a normal precipitation year. In addition to precipitation, there are other variables that might be attributable to differences in water use including leaks and new landscapes.

Get Feedback

The first week in April 2006, a cover letter, survey (Appendix C), water use graph, and a self-addressed stamped return envelope were mailed to the participants after the one-year period to get feedback about the program. Conducting a survey of this type involves several challenges in design and implementation given that this Demonstration Program was voluntary and most participants are already water conscious.

The survey leads the respondent through a series of forty-eight questions about their familiarity and attitudes toward water use, including general aspects to more specific. The survey contains eleven sections:

1. Submit proof
2. Chart as an information tool
3. Water bill as an information tool
4. Measurement tool
5. Personal choice
6. Accommodate landscape watering
7. Indoor component
8. Advantages/Disadvantages
9. Water conservation services
10. Voluntary participation
11. Feedback

The survey cover letter describes the role of the study in addressing participant's input concerning the program and stresses the importance of each and every response. A reminder letter was mailed three weeks following the initial mailing and four weeks after that; non-respondents were sent a second survey and cover letter.

A key objective was to get a 100% response from participants. The final survey returns were received and recorded in July 2006. In total, seventy-two surveys were returned out of the seventy-nine resulting in a response rate of 91%. Survey responses were received and coded into a database using SurveyGold. Key results and findings from this analysis are given in the section "Survey Results & Findings" Appendix D provides a complete record of the response frequencies.

Customer Acceptance & Attitudes

In summary, the survey findings support the following key points describing the sample of Demonstration Program participants in Santa Fe related to customer acceptance & their attitudes.

1. 90% of the respondents did not express any concerns with submitting proof of the number of people in the household.
2. 67% of the water conscious respondents tend to identify strongly with the gallons of water used per month as apposed to the total dollar amount due on the water bill.
3. 66% of the respondents felt that a water allotment helps to detect problems and 72% felt that a water allotment helps to detect problems sooner than our current rate structure.
4. 92% of the respondents exercised their personal choice options. The most common option reported by the respondents was watering different days than allowed in Stage 2.
5. The respondents indicated that they did not find the changes in the water use base line each month to be confusing at the beginning of the program, where the average response was 1.72 (on a scale from 1-Not At All Confusing to 5-Very Confusing). At the end of the program, respondents indicated that they did not find the changes in the water use base line each month to be confusing, where the average response was 1.49 (on a scale from 1-Not At All Confusing to 5-Very Confusing).
6. A large majority of the respondents consider the Water Allotment system fair to customers, where the average response was 4.36 (on a scale from 1-Not Very Fair to 5-Very Fair).
7. A large portion of the respondents felt that there was an incentive to save water while participating in the Demonstration Program, where the average response was 3.60 (on a scale from 1-No Incentive At All to 5-Very High Incentive).
8. More than 95% of the respondents indicated that their preference is "Water Budget and Personal Choice" as apposed to "No Water Budget and Water Restrictions."
9. There is considerable interest by 99% of the respondents in seeing that the City consider a Budget-Based Water Allotment rate structure in the future.
10. The majority of the responses about what was liked best about the program were personal choice especially as it pertains to outdoor watering.
11. The most common responses regarding what was not liked about the program was the signs provided for the front yards and comments on the allotments both too high and too low.

Survey Results & Findings

Section 1 - Submit Proof

The survey begins with two questions concerning reluctance from the participants to submit proof of the number of persons in the household to the Water Division. At the beginning of the Demonstration Program participants were asked to submit proof of the number of persons in the household if there were more than two. Types of proof were a valid driver's license, birth certificate, insurance card, etc.

The first question asked if there were concerns with submitting this proof. 90% of the respondents did not have concerns with submitting proof of the number of people in the household. A follow-up question asked for an explanation if the respondent answered yes to having concerns. Some of the responses suggest that the wording and structure of the question was confusing, as respondents were confused concerning one and two person per household allotments and the reason for the default.

Section 2 - Chart as an Information Tool

A primary purpose of the budget-based water allotment was to serve as an information tool. At the beginning of the demonstration program participants were given a chart showing the targeted water use baseline for each month. Questions 3, 4 and 5 direct the respondent's attention toward the targeted water use baseline for each month.

Perceived awareness of the household's required water use was indicated by responses to question 3, where only 49% of the respondents kept the chart to use during the Demonstration Program possibly because they felt they didn't need it. In a follow-up question, 71% of those that kept the chart reported that they did use it during the test period. Another follow-up question gauges the respondents perceived usefulness of the chart which varied as figure 1 below indicates, where the average response was 3.09 (on a scale from 1-Not Very Useful to 5-Very Useful).

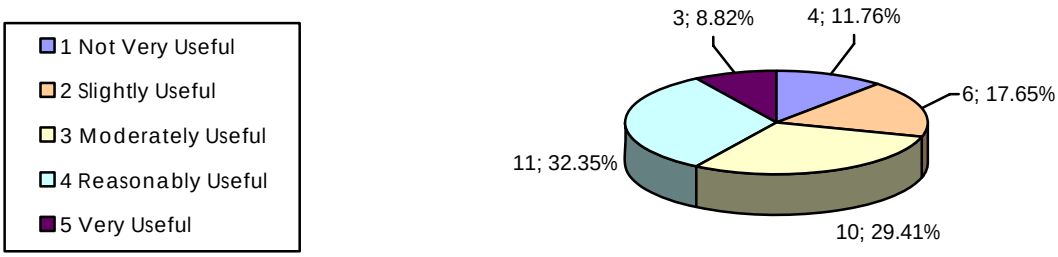


Figure 1

Questions 6, 7, 8 and 9 were designed to determine if the respondents used the water bill as an information tool. Question 6 gauges the respondent's perception concerning the readability of the water bill, where the average response was 4.29 (on a scale from 1-Not Very Easy to 5-Very Easy). Question 7 gauges the respondent's attitude concerning the value of the graph that displays current water use and water history on the water bill, where the average response was 4.34 (on a scale from 1-Not Very Important to 5-Very Important).

A little more than 67% of the respondents indicated the gallons of water used per month was more important than the total dollar amount due on the water bill with a small percent indicating both were equally important. Question 9 requested feedback concerning changes that the respondents would like to see on their water bill. Some examples are:

- A more extensive chart with twelve month water history
- More information and descriptions of fees, surcharges and rates
- A chart comparing size of households with water use

Section 4 – Measurement Tool

A primary purpose of the Budget-Based Water Allotment was to serve as a measurement tool and tell the customer that a problem has occurred, such as a leak or excessive watering. Question 10 examines how many respondents were aware of a leak. It is very interesting to note that over 19% of the respondents experienced a leak while participating in the Demonstration Program. Question 11 is a follow-up question for future evaluation. Some of the responses suggest that the wording and structure of question 12 was confusing, where respondents were asked if they experienced over-watering or spikes from watering while participating in the Demonstration Program. The intent was to find out if respondents were tracking their water bill and comparing water use. Question 13 was also a follow-up question for more evaluation.

Questions 14 and 15 gauge the respondent's perception of how well a water allotment program helps to detect problems with 66% reporting they believed it did. In a follow-up question, 72% of those that reported yes indicated that a water allotment does help to detect problems sooner compared to the current rate structure.

Section 5 – Personal Choice

The concept of the Budget-Based Water Allotment was an attempt to give the participant more options and personal choice, rather than attempting to regulate or ban specific water use, while intending to provide an effective way to conserve water. Question 16 indicates the respondent's preference of personal choice. It was not surprising that 92% of the respondents exercised their personal choice options and either washed their car, planted grass, trees, or shrubs in their landscape, or watered differently than allowed in Stage 2. The most common option reported by the respondents was watering different days than allowed in Stage 2 as indicated in figure 2 below.

As expected some of the participants seized the opportunity to add to their landscape following years of restrictions on planting and water use. 34% of the respondents reported they watered more often than the days allowed in Stage 2, most likely due to the 39% that planted trees or shrubs and 14% that planted grass.

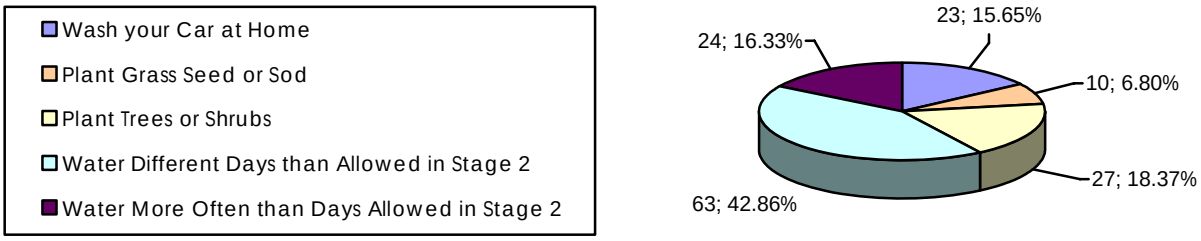


Figure 2

Section 6 – Accommodate Landscape Watering

Factors affecting outdoor water use changes based on the weather are the subject of this section. Questions 17 through 22 direct the respondent's attention toward their home's outdoor water use, raising the following questions: Do you understand the bell shape curve? How confusing are the changes in the water use base line each month? And, what methods of watering do you use?

Judging by responses to question 17, which asks the respondent if they understood the bell shape curve that is associated with outdoor watering before the Demonstration Program began, where 90% reported that they did understand the bell shape curve might indicate a very water conscious group of participants. Notable is the response to the follow-up question, where 60% of the respondents said they were more familiar with the bell shape curve at the end of the Demonstration Program.

Question 19 gauges the respondent's perception concerning how confusing the changes in the water use base line each month was at the beginning of the Demonstration Program, where the average response was 1.72 (on a scale from 1-Not At All Confusing to 5-Very Confusing). See figure 3 below.

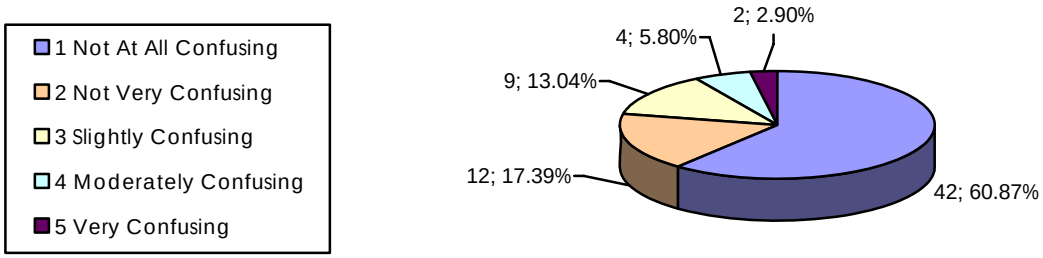


Figure 3

Question 20 gauges the respondent's perception concerning how confusing the changes in the water use base line each month was at the end of the Demonstration Program, where the average response was lower than the previous question with 1.49 (on a scale from 1-Not At All Confusing to 5-Very Confusing). See figure 4 below.

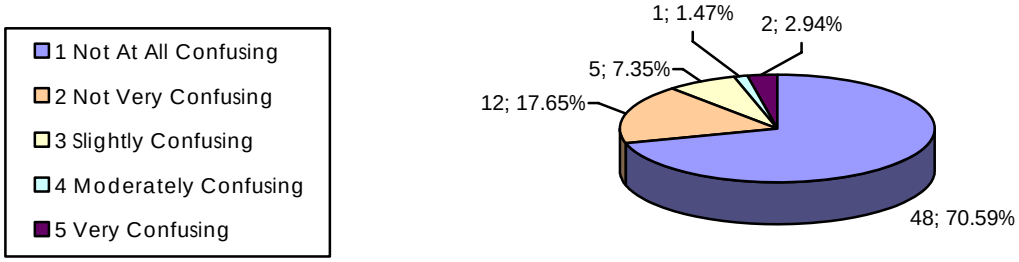


Figure 4

Question 21 attempts to collect information concerning the methods of watering used by the participants, raising the following questions: What types of irrigation systems are being used? Are systems automatic or manual? And, what alternative methods of watering are being used? There is no wrong method of watering, although it is considered to be more efficient to water with a properly designed and installed drip system. It is interesting to note that 88% of the respondent's water with a hand held hose and 33% water with a hose-end sprinkler compared to the 38% that have a drip system. It appears that a very small group, less than 1% have an automatic sprinkler system.

Homeowners do seem to be motivated to conserve water by using alternative methods of watering, where 61% of the respondents reported using harvested water and 46% reported using gray water.

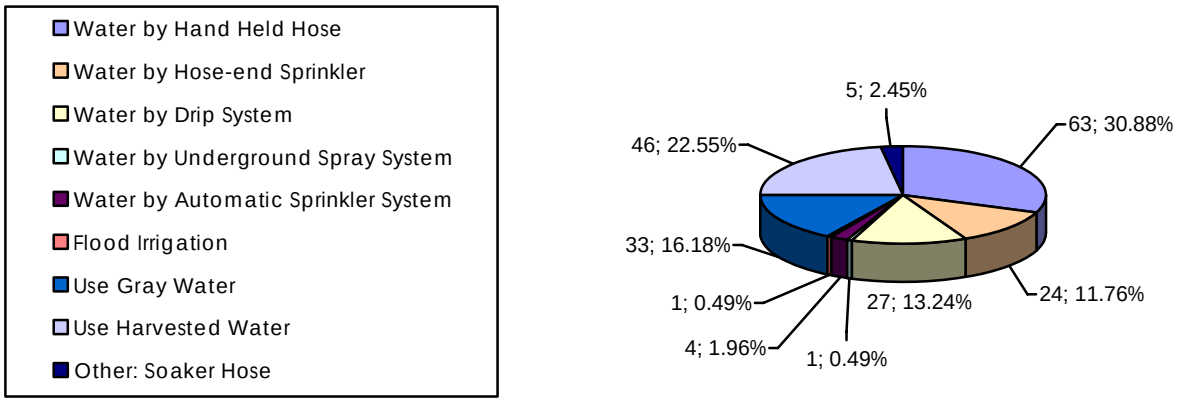


Figure 5

Question 22 requested feedback concerning suggestions or considerations for calculating the outdoor allotment. Some examples are:

- An allowance for winter watering
- A higher allotment
- A lower allotment

Section 7 – Indoor Component

The budget-based water allotment has an indoor component separate from the outdoor. The months November through February did not include an outdoor allotment. Questions 23, 24, 25 and 26 direct the respondent's attention toward the indoor component of the targeted water use baseline. Question 23 indicates that a fair portion of the respondents at 29% did go over their allotment in one of the four months without an outdoor allotment. Question 24 is a follow-up question, where 61% of the respondents reported they watered at least once during the four month period in question.

Question 25 indicates actual household efforts to conserve water. A significant majority of households report having at least one water-saving device. Most common are low-flush toilets, installed in 83% of homes, followed by low-flow showerheads, installed in 70%. Notable is the 38% of homes with water saving dishwashers and 30% that have high-efficiency (front loading) washing machines.

Question 26 requested feedback concerning suggestions or considerations for calculating the indoor allotment. Some examples are:

- An allowance for people with disabilities and extenuating health reasons
- An allowance for guests that stay for an extended period
- A lower allotment

Section 8 – Advantages/Disadvantages

The budget-based water allotment rate structure has advantages and incentives built in as compared to the current rate structure. Questions 27 through 32 direct the respondent's attention to advantages or disadvantages of the rate structure, raising the following questions: Is the water allotment system fair? Is there an incentive to save water? Is there an associated landscape benefit? And, which is preferred most, no water budget with water restrictions or water budget with personal choice?

Perception of the Water Allotment system as being fair is indicated by responses to question 27as figure 6 below indicates, where the average response was 4.36 (on a scale from 1-Not Very Fair to 5-Very Fair).

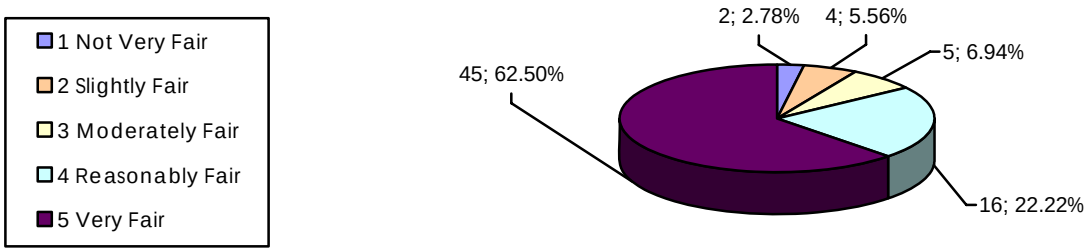


Figure 6

Question 28 gauges the respondent's attitude toward an incentive to save water while participating in the Demonstration Program, where the average response was 3.60 (on a scale

from 1-No Incentive At All to 5-Very High Incentive). In a follow up, question 29 gauges the respondent's perceived awareness of their water use connected with participation in the Demonstration Program, where the average response was 3.31 (on a scale from 1-No More Awareness to 5-Much More Awareness). For both questions, comments from respondents reflected that they were already low water users. Continuing with awareness, question 30 gauges perceived awareness of how much water the respondent should use each month, where the average response was 3.34 (on a scale from 1-No Awareness to 5-More Awareness).

The outdoor allotment was designed to allow a quality of life for the community that is associated with landscapes. Question 31 directs the respondent's attention toward the landscape benefit associated with a Budget-Based Water Allotment as depicted in figure 7 below, where the average response was 4.21 (on a scale of 1-No Benefit At All to 5-Great Benefit).

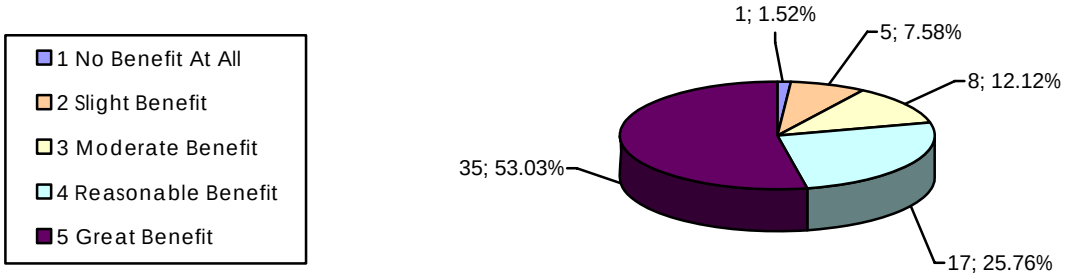


Figure 7

Question 32 should have been in section 5, Personal Choice, where respondents are asked which they prefer most, no water budget with water restrictions or water budget with personal choice. An overwhelming 96% reported that their preference is water budget with personal choice.

Section 9 – Water Conservation Services

The structure of this section was to address the element of the Demonstration Program, where participants were not to receive any special treatment or services before or during the test period. In addition, information was sought after associated with participants contacting the Water Division with questions or requested services and literature during the test period. Questions 33 through 40 direct the respondent's attention toward water conservation and billing customer service assistance.

Question 33 asked the respondent if they were aware of water conservation assistance, where 65% reported they were aware of the services offered. Follow-up questions were asked of respondents who answered yes, where 28% of the respondents reported they requested literature, 7% reported they requested leak detection help, keeping in mind that 19% reported experiencing a leak and 2% requested assistance with outdoor irrigation.

Question 37 asked the respondent if they contacted the Water Division with questions concerning the Demonstration Program with 32% reporting they did contact the Water Division at least once. In addition, 15% contacted the Water Division with questions concerning their

water bill and 11% reported contacting the Water Division with questions concerning their water use.

Question 40 requested feedback concerning suggestions for services or assistance that the respondent would like to see the Water Division or Water Conservation Office offer. Some examples are:

- More gray water help
- Real time meter reads
- More bill inserts and information

Section 10 – Voluntary Participation

Questions 41, 42, and 43 direct the respondent's attention to the voluntary aspect of participation in the Demonstration Program. Question 41 requested feedback concerning the main reason for participating in the Demonstration Program. Some examples are:

- Flexibility and freedom of choice
- Water conservative
- Assist and demonstrate, good idea

Participants were required to participate for the full one-year test period. Question 42 asked the respondents if they would have gotten out of the Demonstration Program early if they were not required to participate for the entire year, where 100% reported that they would have stayed in the program. Question 43 was a follow-up for respondents reporting that they would have gotten out of the program.

Section 11 – Feedback

This final section of the survey gathers information from the respondents concerning concepts of the Demonstration Program, raising the following questions: What was liked best? What was liked least? What should be changed? Are there any comments? And, the big question asked; would they like to see the City consider a Budget-Based Water Allotment rate structure in the future? There is significant interest by 99% of the respondents in seeing that the City consider a Budget-Based Water Allotment rate structure in the future.

Question 45 requested feedback concerning what the respondent liked best about the Demonstration Program. Some examples are:

- Personal choice and flexibility
- Water allotment
- Awareness

Question 46 requested feedback concerning what the respondent liked least about the Demonstration Program. Some examples are:

- No winter allotment
- Sign in yard

Question 47 requested feedback concerning what the respondent would like to change regarding the Demonstration Program. Some examples are:

- Winter allotment
- Lower the allotment
- Raise the allotment

The last question requested feedback concerning any comments or anything that the respondent would like to add about the Demonstration Program. There was a lot of great input from this question and entire survey. All the responses to this question and feedback for the rest of the survey can be found in Appendix D.

Conclusions

The main objective of the Residential Budget-Based Water Allotment Demonstration Program was to test the billing system and determine if the current billing system could be programmed to handle the unique parameters of the rate structure. Entering into the Demonstration Program, it was realized that since the participation was voluntary, the random sample of households would be water conscious and not an accurate cross section of water users. In addition, a key factor to remember is that the City of Santa Fe has an estimated 27,000 residential customers and the participation in the Demonstration Program was seventy-nine which equates to less than .003%. With that said, some questions regarding the implementation of a city wide budget-based water allotment rate structure cannot be answered simply because there is not enough information. Some examples are:

- The amount of time required by customer service staff to verify and input in the billing system changes for the number of persons per household.
- The number of full time employees needed initially to implement this rate structure.

Comments from the ITT Systems and Programming Manager:

- Modifying the billing program to address the issue of water bills with thirty-two or more days is not recommended. The billing program is an extremely complex program, which are over one hundred pages of calculations. It would be extremely difficult to write technical specifications to ensure the billing calculations are correct because there are so many variables.

Comments from the Utility Billing Director:

- This proposal could create an additional 2,000 to 4,000 bill item codes, especially if bill items are required for each bill cycle as may be required to resolve the issue with bills in excess of thirty-two days. This would be very difficult to set up, test and, more importantly, maintain, especially when rates, tiers, or other factors change.
- Modifying the billing program to overcome some of the issues would be complicated, expensive and prone to generate problems and errors in customer billings.
- Additional customer service staff would be required to verify the accuracy of the information provided by the customer as to the size of the household. Additionally, the workload of Customer Service would increase due to request for adjustments on accounts. It should be noted that our current work space will not support additional staff.

The billing system was able to accommodate the number of persons per household and allow for the surcharge rate structure for excess water use. In addition, the billing system could adjust for the changing base water use on a monthly basis.

The billing system could not prorate the base water use for meter reads in the middle of the month. Additional programming would address this problem but would not be as accurate as prorating. In addition water bills with thirty-two or more days as mentioned above pose the biggest problem with the billing system.

Another objective of this project was to track water use and determine water savings. The concern rose when customers were no longer required to adhere to water use restrictions: Would water use increase? Reported in the survey we know that 14% of the respondents

planted grass and 39% planted trees or shrubs. In addition, the City of Santa Fe experienced one of the driest winters on record which prompted some participants to increase outdoor watering November through February. Even with these factors taken into consideration, overall the participant's water use during the demonstration period was 2% less than the average of the two previous years used as a base for comparison.

A very important objective of this project was to determine customer acceptance of the Budget-Based Water Allotment rate structure. There was great feedback from the 91% of participants that returned the survey. There was an overwhelming response from the respondents of the survey with 99% reporting that they would like to see the City consider a Budget-Based Water Allotment rate structure in the future.

The findings suggest the participants in the Demonstration Program are aware of the role of water in their community. Such awareness is very important because it is fundamental to behavior and to behavioral changes and actions that can lead to less wasteful practices and to the adoption of more water-efficient landscapes. Awareness is best viewed as a key community asset that should be nourished and enhanced through education and conservation programs.

This report summarizes only the initial findings; additional analyses of these responses are likely to yield further insights concerning water use.

Appendix A
Public Information

Tired of Water Restrictions?

The City of Santa Fe is looking for 100 single-family residential customers to participate in a yearlong "Budget-based Water Allotment Demonstration Program." A budget-based water allocation program is one in which each customer is given a specific allocation of water, which that customer can use in any way he or she chooses. Instead of focusing on rules and regulations for how water may be used, a budget-based allocation program focuses on limits to the quantity the customer may use, and eliminates the need for "water Police" or landscape and car washing ordinances. Thus, budget-based water allocations give consumers more options and personal choice, while continuing to provide an effective conservation program.

The City's proposed Demonstration Program will introduce the community to the water allocation concept by providing the customers participating in the program with a targeted water use baseline for each month based on a recognized standard usage for households, taking into account basic water usage needs, irrigation requirements, and number of persons per household. For participants in the demonstration program, the City will assess a surcharge only when the customer's water usage exceeds the budget, regardless of how the water is being used.

The Budget-based Water Allotment program is designed to allow a quality of life for the community while staying within the constraints of the City's water supplies, and it is anticipated that the Demonstration Program for which the City is seeking 100 participants will show how such a program can achieve this goal

Figure A-1. Text and Logo used in advertisements

Residential Budget-based Water Allotment Demonstration Program

The City of Santa Fe is looking for 100 single-family residential customers to participate in a yearlong "Budget-based Water Allotment Demonstration Program." A budget-based water allocation program is one in which each customer is given a specific allocation of water, which that customer can use in any way he or she chooses. Instead of focusing on rules and regulations for how water may be used, a budget-based allocation program focuses on limits to the quantity the customer may use, and eliminates the need for "water Police" or landscape and car washing ordinances. Thus, budget-based water allocations give consumers more options and personal choice, while continuing to provide an effective conservation program.

The City's proposed Demonstration Program will introduce the community to the water allocation concept by providing the customers participating in the program with a targeted water use baseline for each month based on a recognized standard usage for households, taking into account basic water usage needs, irrigation requirements, and number of persons per household. The amount of water that will be allocated to households is shown on the chart below. For participants in the demonstration program, the City will assess a surcharge only when the customer's water usage exceeds the budget, regardless of how the water is being used.

Participants in the demonstration program will be able to compare water use on a monthly basis to the baseline water use as shown on the chart. It is anticipated that as the participants become more familiar with their water use, and better understand the "bell shaped curve" that is associated with it, they will be able to apply their allocation of water as they desire, without using water in excess of their water usage limits.

The Budget-based Water Allotment program is designed to allow a quality of life for the community while staying within the constraints of the City's water supplies, and it is anticipated that the Demonstration Program for which the City is seeking 100 participants will show how such a program can achieve this goal.

Stage 2 Water Shortage Emergency Conservation Limit

Number of Occupants	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1,500	1,500	2,100	3,100	4,400	6,100	6,100	6,100	4,400	3,100	2,100	1,500
2	3,000	3,000	3,600	4,600	5,900	7,600	7,600	7,600	5,900	4,600	3,600	3,000
3	4,500	4,500	5,100	6,100	7,400	9,100	9,100	9,100	7,400	6,100	5,100	4,500
4	5,900	5,900	6,500	7,500	8,800	10,500	10,500	10,500	8,800	7,500	6,500	5,900
5	7,500	7,500	8,100	9,100	10,400	12,100	12,100	12,100	10,400	9,100	8,100	7,500
6	8,900	8,900	9,500	10,500	11,800	13,500	13,500	13,500	11,800	10,500	9,500	8,900

Emergency Surcharges

- ✓ Tier 1 surcharges will be $10.00 per 1,000 gallons above the baseline allocation.
- ✓ Tier 2 surcharges will be $10.00 per 1,000 gallons for the water used above the baseline allocation plus 5,000 gallons. This is in addition to Tier 1 surcharges.
- ✓ Tier 3 surcharges will be $10.00 per 1000 gallons for the water used above the baseline allocation plus 10,000 gallons. This is in addition to Tier 1 & 2 surcharges

If you would like to put your name on the list or get more information, call 955-4209.

Figure A-2. Direct Mailer

City of Santa Fe

Application for Residential Budget-based Water Allotment Demonstration Program

(Please Print)

Name _____

Name on account if different _____

Service Address _____ Zip _____

Mailing Address _____

City _____ State _____ Zip _____

Home Phone _____ Alternate Phone _____

Total number in household ___

I hereby apply to the Residential Budget-based Water Allotment Demonstration Program on this application. I agree to comply with the rules and regulations as established by the City (Ordinance 25-4.2B) as a condition of participation in the demonstration program. I understand that I am obligated to participate in the demonstration program for one full year. I swear or affirm under penalties provided by law that the information on this application is true and correct.

The default water allotment baseline will be for a two-person household. If there are more than two (2) permanent residents in the household, you must submit a request form to receive an increased water allotment. If you have any questions, please contact the City of Santa Fe Water Conservation Office at (505) 955-4209.

Right of Access: The City of Santa Fe is authorized to enter on private premises for the purposes of inspecting, maintaining, testing, reading, changing, installing or removing its meters (City Code 25-1.6B).

It is the customer's responsibility to ensure clear access to the water meter. Water meters must be clear of obstructions such as vegetation, vehicles, dirt, large objects and trash. Obstructed meters may be charged a meter reread charge.

Applicant's Signature _____ Date _____

Water Division Use Only

Account Number _____ Meter Number _____

Cycle ____

City of Santa Fe Water Conservation Office 801 West San Mateo Rd., PO Box 909, Santa Fe, NM 87504-0909

Figure A-3. Application

City of Santa Fe

Request for Increased Residential Water Allotment

(Please Print)

Name _____

Name on account if different _____

Address _____ Zip _____

City _____ State _____ Zip _____

Home Phone _____ Alternate Phone _____

I request an increased water allocation for the following reason(s):

( ) Three or more permanent residents in household: *Total number in household* ____

( ) Change in the number of permanent residents in household: *Total number in household* ____

( ) Medical need that demonstrates an increase in water use for health and safety reasons. ***Include verifiable medical documentation***

( ) Licensed care facility (in a residential dwelling unit). ***Submit a copy of business license***

Applicant must attach proof of permanent residency for each person in the household. Proof may be a valid drivers license with a current address, birth certificate, insurance card showing dependants, lease agreements, signed copies of income tax returns or legal documents approved by the Water Division.

Permanent Occupants

1 _____ 2 _____

3 _____ 4 _____

5 _____ 6 _____

7 _____ 8 _____

I hereby affirm that the information contained herein, including attachments that I have provided to City of Santa Fe Water Division is complete and accurate and I will promptly notify the Water Division of any changes to said information. I also understand that the Water Division may verify this information and if determined to be inaccurate, I will be subjected to all applicable surcharges and penalties.

Applicant's Signature _____ Date _____

Water Division Use Only

Account Number _____ Meter Number _____

Denied ____ Approved ____ Signature _____ Date _____

City of Santa Fe Water Conservation Office 801 West San Mateo Rd., PO Box 909, Santa Fe, NM 87504-0909 (505) 955-4209

Figure A-4. Request for Increased Allotment

Residential Budget-based Water Allotment Demonstration Program Q&A

City of Santa Fe
Water Division

Q. Is the water allotment the same every month?
A. No, the water allotment changes to accommodate changing landscape water requirements throughout the year.

Q. Does everyone get the same water allotment?
A. No, The water allotment is designed to accommodate the number of persons in each household. The default is two persons per household where one and two person households receive the same allotment. For each additional person over two the allotment is increased.

Q. How is the water allotment determined?
A. The allotment is a combination of an indoor allotment based on the number of persons in the household and a landscape allotment that is the same for all households.

Q. What is the charge for water?
A. The charge is the same as you are paying now, $4.09 per 1000 gallons.

Q. Are there any penalties?
A. Yes, there are surcharges applied to your bill if you exceed your water allotment.

Q. Can I wash my car at home?
A. Yes, car washing is normally restricted in Stage 2, but under the conditions of this program, you are exempt from this restriction and may wash your car at home. You must use a hose shut-off nozzle.

Q. Can I plant grass?
A. Yes, the grass restriction is also in Stage 2. The City of Santa Fe does not allow the planting of Blue grass in any stage.

Q. Can I water between 10 am and 6 pm?
A. No, Year round water restrictions prohibit the watering between 10 am and 6 pm May 1 through October 31.

Q. What about complaints from my neighbors?
A. 18" x 24" signs will be provided for front yards with the message "This address is participating in the City of Santa Fe's Residential Budget-based Water Allotment Demonstration Program. 955-4225 City of Santa Fe Water Conservation Office."

Figure A-5. Q & A Sheet Page 1

Q. When does the Demonstration Program start and how long will it last?

A. The program starts in March 2005 with cycle 4 customer water meters being read at the end of March and will last for 12 months ending with cycle 3 customer water meters being read in March 2006.

Q. What if my kids come home from College?

A. Contact our office and fill out an adjustment application so we can adjust your allotment for the months they are home. Please let us know of this adjustment in household members before they are scheduled to arrive!

Q. What if the number of permanent residents changes?

A. Contact our office and fill out an adjustment application.

Q. Can I get an adjustment for a dinner party?

A. No, the allotment is designed to not be so strict that dinner guests will ruin your allotment for the month.

Q. What are objectives of this Demonstration Program?

- Test Billing system
- Weed out problems
- Get feedback
- Determine water savings
- Weigh the cost of the program versus the water savings & benefits
- Weigh customer acceptance

Q. What if my meter is read in the middle of the month?

A. The allotment will be prorated for reads in the middle of the month.

Q. Will there be changes in the appearance of my bill?

A. No, You will receive your normal bill. If there are any adjustments, they will show up on your next bill. We do, however, have a new bill format that we hope to begin using citywide next month.

Q. What if the City goes out of Stage 2?

A. The water allotment will increase and the surcharges will change. You will use the Year Round Water Conservation Baseline Chart.

Q. What happens if we go into Stage 3?

A. The water allotment will decrease. The same is true if we should go into Stage 4.

Q. Where do I call with questions or concerns?

A. Call our Water Conservation Customer Support number at 955-4209.

Figure A-6. Q & A Sheet Page 2

Appendix B
Weather Data

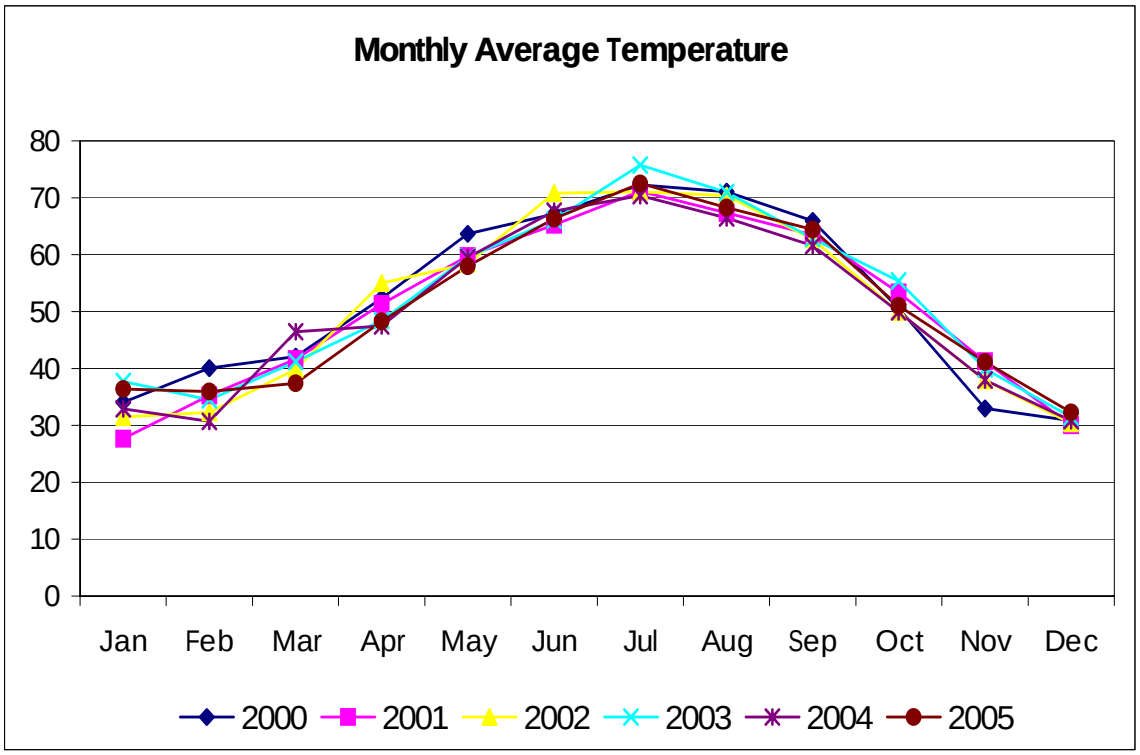


Figure B-1. Monthly Average Temperature

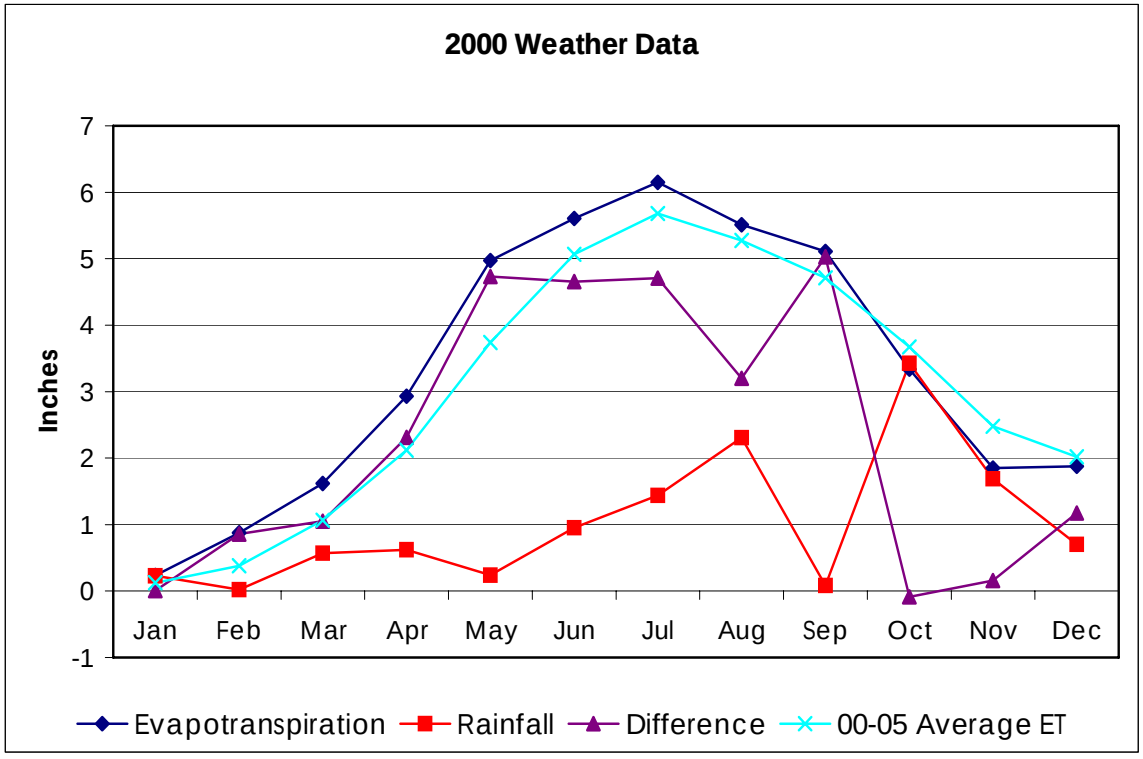


Figure B-2. 2000 Weather Data

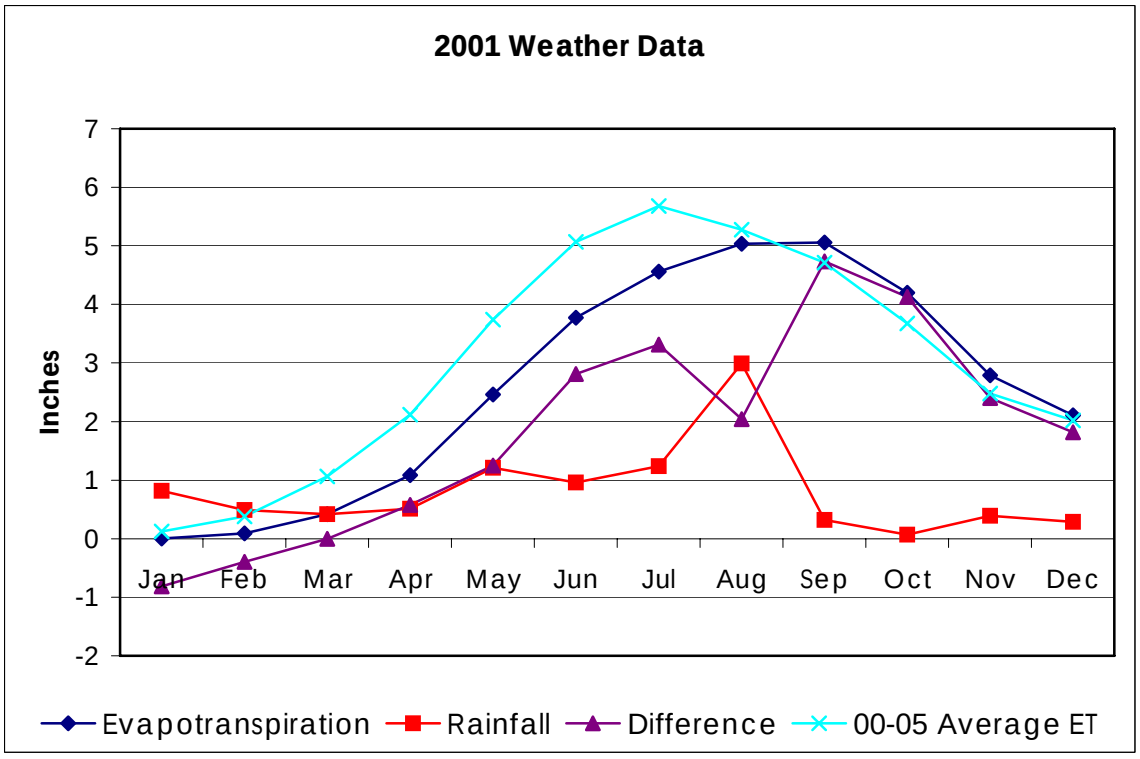


Figure B-3. 2001 Weather Data

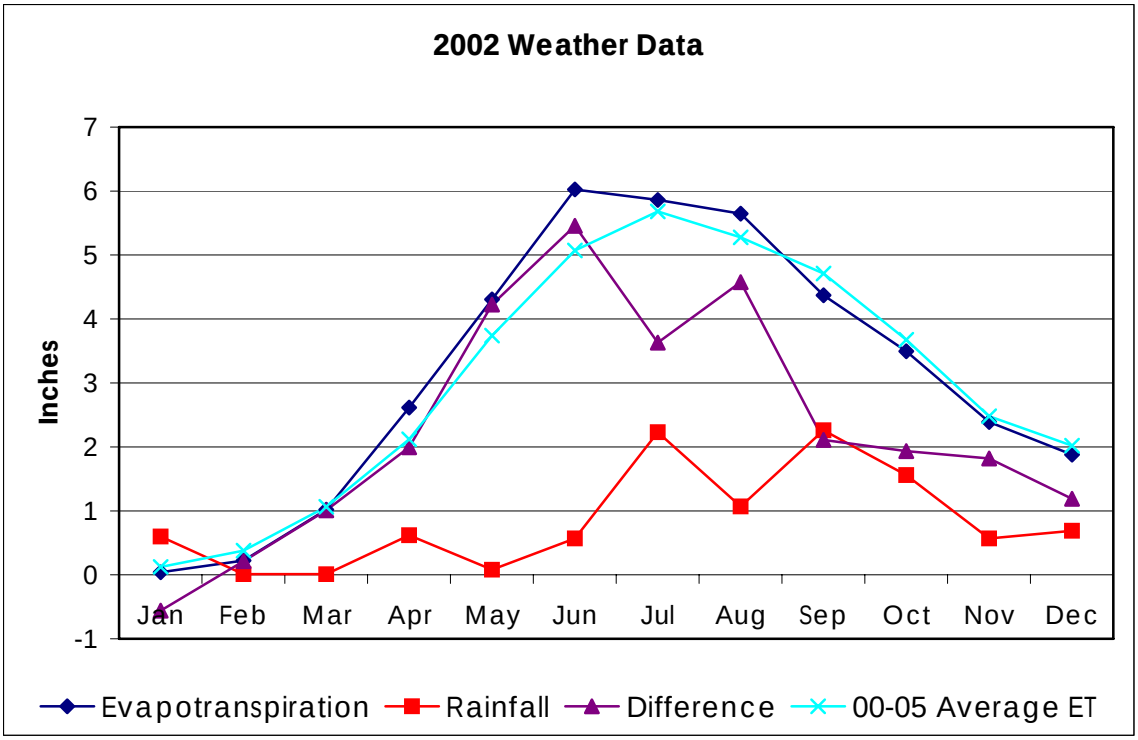


Figure B-4. 2002 Weather Data

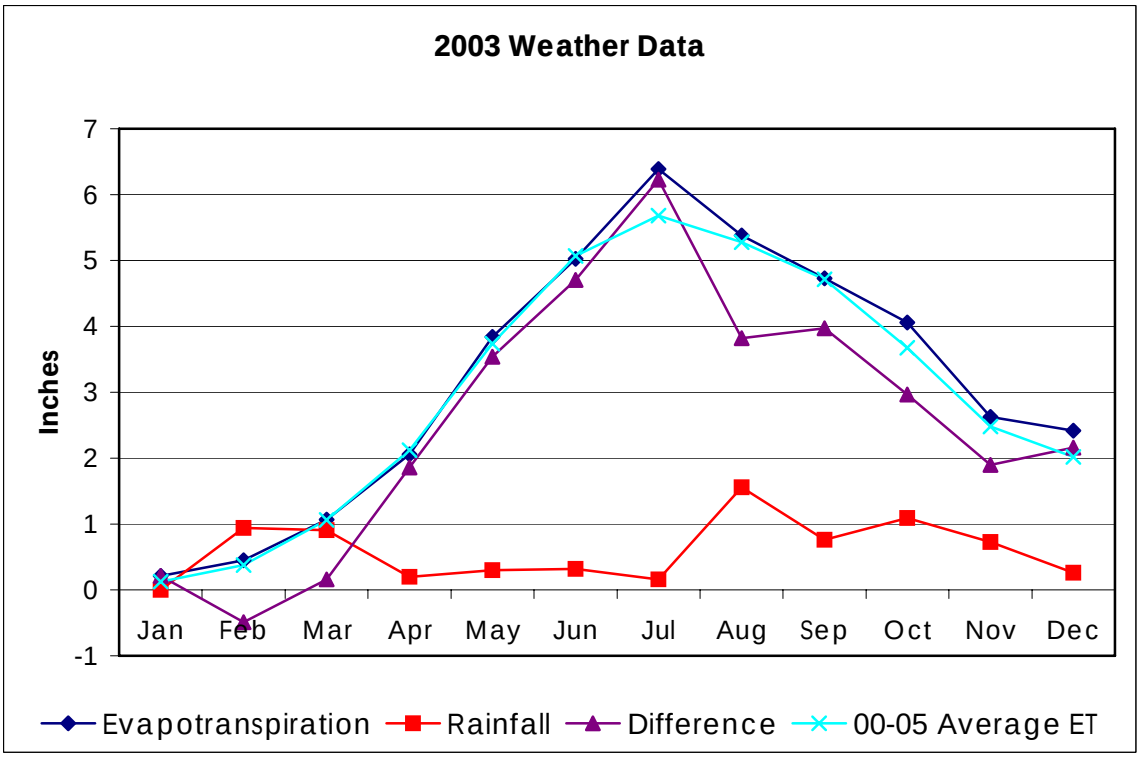


Figure B-5. 2003 Weather Data

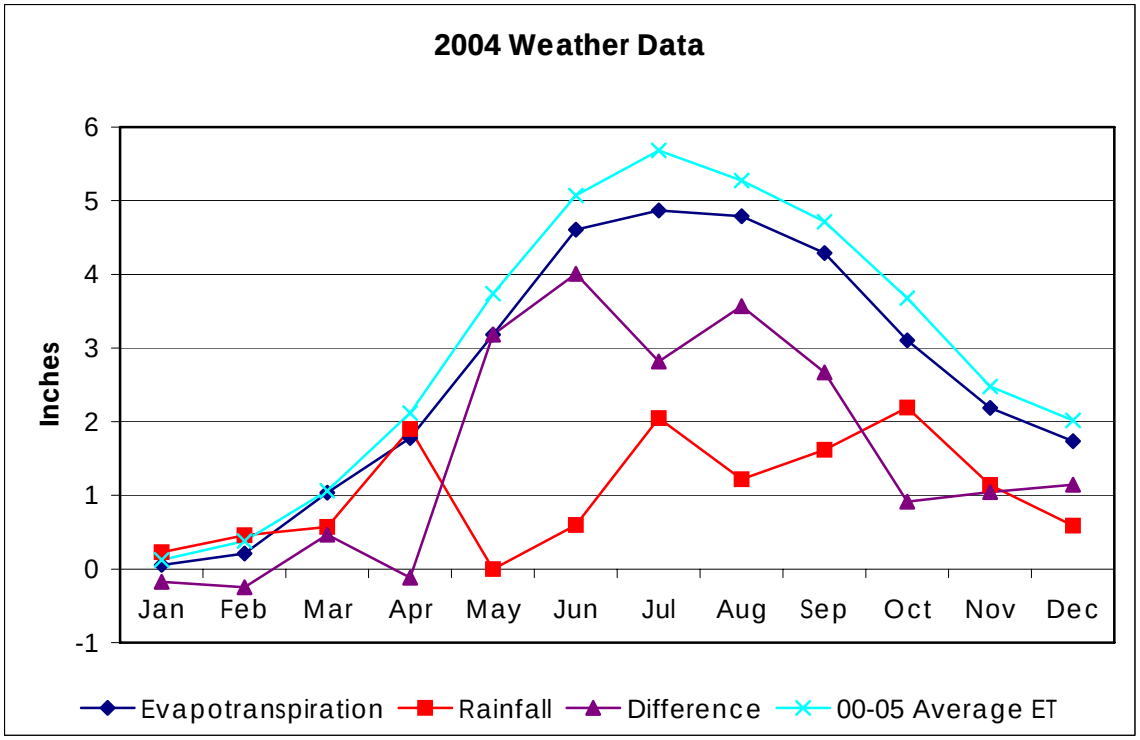


Figure B-6. 2004 Weather Data

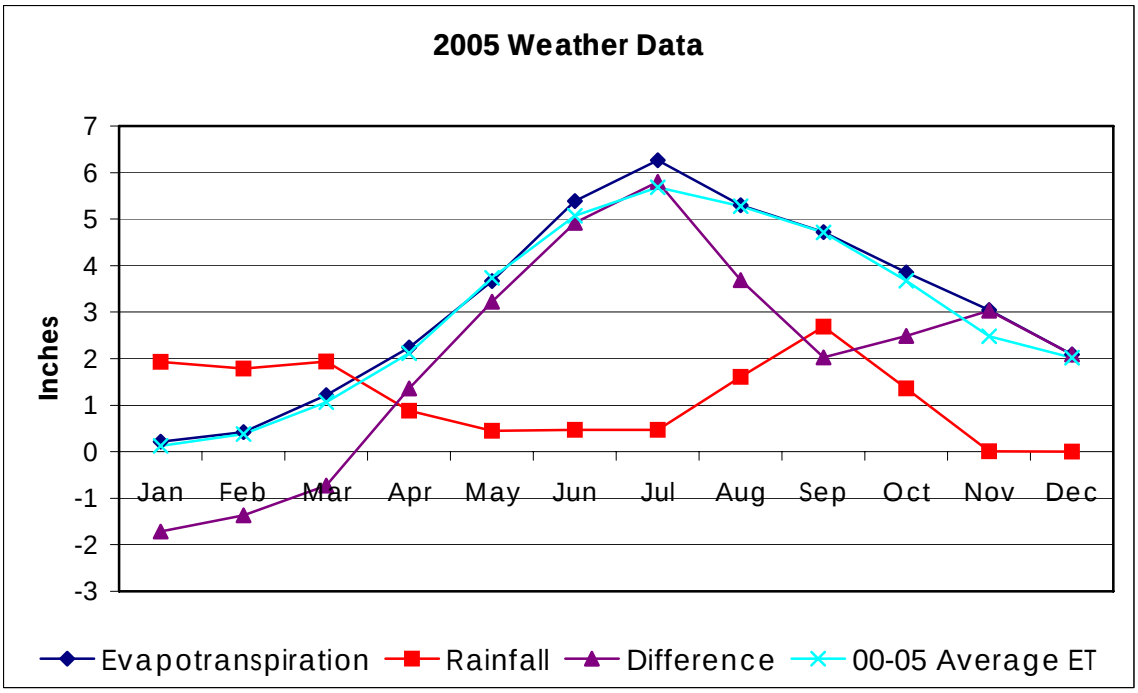


Figure B-7. 2005 Weather Data

Appendix C
Survey

Residential Budget-Based Water Allotment Demonstration Program

SURVEY

City of Santa Fe
Water Division

If you need more room to answer questions use last page.

At the beginning of the Demonstration Program you were asked to submit proof of the number in the household if your household was larger than two (e.g., valid drivers license, birth certificate, insurance card, etc.).

1. Do you have any concerns with submitting proof of the number of people in the household to the Water Division? (Circle letter)

   a. Yes
   b. No

2. If yes, please explain.

A primary purpose of a Budget-Based Water Allotment is to serve as an information tool. At the beginning of the Demonstration Program you were given a chart that shows the targeted water use baseline for each month.

3. Did you keep the chart to use during the Demonstration Program? (Circle letter)

   a. Yes
   b. No

4. If yes, did you use the chart to compare your water use each month? (Circle letter)

   a. Yes
   b. No

5. If yes, on a scale from 1 (not very useful) to 5 (very useful) did you find the chart useful? (Indicate by circling a letter from 1 to 5 below)

   (Not very) 1 2 3 4 5 (Very useful)

Your water bill is also an information tool.

6. On a scale from 1 (not very easy) to 5 (very easy) do you feel that your water bill is easy to read? (Indicate by circling a letter from 1 to 5 below)

   (Not very) 1 2 3 4 5 (Very easy)

7. On a scale from 1 (not very important) to 5 (very important) how important is the graph that shows current water use and water history? (Indicate by circling a letter from 1 to 5 below

   (Not very) 1 2 3 4 5 (Very important)

8. Which is more important to you. (Circle letter)

   a. The gallons of water used per month
   b. The total $ amount due on the water bill

9. Are there any changes that you would like to see on your water bill?

A primary purpose of a Budget-Based Water Allotment is to serve as a measurement tool.

10. Did you experience a leak while participating in the Demonstration Program? (Circle letter)

    a. Yes
    b. No

11. If yes, what month or months?

12. Did you experience over-watering or spikes from watering while participating in the Demonstration Program? (Circle letter)

    a. Yes
    b. No

13. If yes, what month or months?

14. Do you feel that a water allotment program helps to detect problems? (Circle letter)

    a. Yes
    b. No

15. If yes, do you feel that a water allotment helps to detect problems sooner than our current rate structure? (Circle letter)

    a. Yes
    b. No

A Budget-Based Water Allotment is an attempt to give the consumer more options and personal choice, rather than attempting to regulate or ban specific water use (no restrictions).

16. While participating in the Demonstration Program which of the following did you do? (Circle all that apply)

    a. Wash your car at home
    b. Plant grass seed or sod
    c. Plant trees or shrubs
    d. Water on different days than the days allowed in Stage 2
    e. Water more often than three days per week allowed in Stage 2

The Budget-Based Water Allotment by design changes by month to accommodate landscape watering and changes in the weather.

17. Before the Demonstration Program did you understand the bell shape curve that is associated with your water bill (i.e., higher water use in the summer months)? (Circle letter)

    a. Yes
    b. No

18. Now that the Demonstration Program has ended are you more familiar with the bell shape curve? (Circle letter)

    a. Yes
    b. No

19. On a scale from 1 (not at all confusing) to 5 (very confusing) at the start of the Demonstration Program did you find the changes in the water use base line each month to be confusing? (Indicate by circling a letter from 1 to 5 below)

    (Not at all) 1 2 3 4 5 (Very confusing)

20. On a scale from 1 (not at all confusing) to 5 (very confusing) at the end of the Demonstration Program do you find the changes in the water use base line each month confusing? (Indicate by circling a letter from 1 to 5 below)

    (Not at all) 1 2 3 4 5 (Very confusing)

21. What methods of watering do you use? (Circle all that apply)

    a. Water by hand held hose
    b. Water by hose-end sprinkler
    c. Water by drip system
    d. Water by underground spray system
    e. Water by automatic sprinkler system
    f. Flood irrigation
    g. Use gray water
    h. Use harvested water
    i. Other (specify)

22. Do you have any suggestions or considerations for calculating the outdoor allotment?

The Budget-Based water allotment has an indoor component separate from the outdoor. The months November through February did not include the outdoor allotment.

23. While participating in the Demonstration Program did you go over your allotment in any of these months? (Circle all that apply)

    a. November
    b. December
    c. January
    d. February

24. While participating in the Demonstration Program did you water in any of these Months? (Circle all that apply)

    a. November
    b. December
    c. January
    d. February

25. The type of appliances and fixtures in your home affect your indoor water use. Which of the following items do you have in your home? (Circle all that apply)

    a. 1.6 gallon per flush toilet
    b. 3.5 gallon per flush toilet
    c. The older 5 or more gallon per flush toilet
    d. High-efficiency (front loading) washing machine
    e. Water-saving dishwasher
    f. Low-flow showerhead
    g. Swamp cooler
    h. Other (specify)

26. Do you have any suggestions or considerations for calculating the indoor allotment?

Advantages/Disadvantages of a Budget-Based Water Allotment as compared to the current rate structure.

27. On a scale from 1 (not very fair) to 5 (very fair) do you feel that a Water Allotment system is fair to customers? (Indicate by circling a letter from 1 to 5 below)

    (Not very) 1 2 3 4 5 (Very fair)

28. On a scale from 1 (no incentive) to 5 (very high incentive) do you feel that there was an incentive to save water while participating in the Demonstration Program? (Indicate by circling a letter from 1 to 5 below)

    (None) 1 2 3 4 5 (Very high)

29. On a scale from 1 (no awareness) to 5 (more awareness) did your participation in the Demonstration Program make you more aware of your water use? (Indicate by circling a letter from 1 to 5 below)

    (None) 1 2 3 4 5 (High awareness)

30. On a scale from 1 (no awareness) to 5 (more awareness) did your participation in the Demonstration Program give you a better idea of how much water you should be using each month? (Indicate by circling a letter from 1 to 5 below)

    (None) 1 2 3 4 5 (Higher awareness)

31. On a scale from 1 (no benefit) to 5 (greater benefit) do you feel that there is a landscape benefit associated with a Budget-Based Water Allotment? (Indicate by circling a letter from 1 to 5 below)

    (None) 1 2 3 4 5 (Greater benefit)

32. Which would you prefer most

    a. No water budget and water restrictions
    b. Water budget and personal choice

Water conservation services are available for all water utility customers. These services include free literature, site visits and/or audits to detect leaks and provide assistance with outdoor irrigation.

33. Were you aware of our water conservation assistance? (Circle letter)

    a. Yes
    b. No

34. If yes, did you request any literature? (Circle letter)

    a. Yes
    b. No

35. If yes, did you request leak detection help? (Circle letter)

    a. Yes
    b. No

36. If yes, did you request assistance with outdoor irrigation? (Circle letter)

    a. Yes
    b. No

37. Did you contact the Water Division/Water Conservation Office or customer service with questions concerning the Demonstration Program? (Circle letter)

    a. Yes
    b. No

38. Did you contact the Water Division/Water Conservation Office or customer service with questions concerning your water bill? (Circle letter)

    a. Yes
    b. No

39. Did you contact the Water Division/Water Conservation Office or customer service with questions concerning your water use? (Circle letter)

    a. Yes
    b. No

40. Are there any services or assistance that you would like to see the Water Division/Water Conservation Office offer?

The participation in this project was voluntary.

41. What was your main reason for participating in the Demonstration Program?

42. Would you have gotten out of the Demonstration Program early if you were not required to participate for the entire year? (Circle letter)

    a. Yes
    b. No

43. If yes, please explain

The implementation of the Demonstration Program is intended to collect information, get feedback from participants to help determine the feasibility of implementing a City wide residential budget-based water allotment rate structure in the future.

44. Would you like to see the City consider a Budget-Based Water Allotment rate structure in the future? (Circle letter)

    a. Yes
    b. No

45. What did you like the best about the Demonstration Program?

46. What did you like the least about the Demonstration Program?

47. What would you change regarding the Demonstration Program?

48. Are there any comments or anything else that you would like to add about the Demonstration Program?

Thank you for participating!

City of Santa Fe Water Conservation Office is conducting this research.

Please return completed questionnaires to:

City of Santa Fe
Water Conservation Office
PO Box 909
Santa Fe, NM 87504-0909

Appendix D

Survey Response Frequency Tables

Section 1: Submit Proof

Table D1. Response Frequency: Concerns with Submitting Proof of Person per Household

	N	%
Yes	7	9.86%
No	64	90.14%
Mean Response	1.90	

Notes: Based on responses to Q1, "Submit Proof"

Table D-2. Response Frequency: If Yes to Q1; Comments Concerning Submitting Proof

	N	%
I believe illegal immigrants or people violating probation or parole may hesitate to provide documentation w/o promises to keep privacy		
I can if needed, but in general too much of my time is taken up by little bureaucratic details like this. It's minor by itself but growing exponentially.		
I have 4 people – 2 adults and 2 children under 4		
I was counted as a two person household & in reality I am a one-person household about 3x/up my 6 grandsons & their 2 parents visit me & I do use lots more than. However your baseline given me was overly generous		
It was a bit of a hassle. And it would be nice to know the information was shredded as soon as it was confirmed.		
My daughter comes to stay with me on weekends.		
Practical issues of tying legal ID with actual place of residence, esp. for minors & young adults.		
Total Responses	7	9.86%

Notes: Based on responses to Q2, "Submit Proof"

Section 2: Chart as an Information Tool

Table D-3. Response Frequency: Keep Water Allotment Chart

	N	%
Yes	35	48.61%
No	37	51.39%
Mean Response	1.51	

Notes: Based on responses to Q3, "Chart as an Information Tool"

Table D-4. Response Frequency: If Yes to Q3; Use the Chart for Comparison

	N	%
Yes	25	71.43%
No	10	28.57%
Mean Response	1.29	

Notes: Based on responses to Q4, "Chart as an Information Tool"

Table D-5. Response Frequency: If Yes to Q3; Perceived Usefulness of Water Allotment Chart

	N	%
Not Very Useful	4	11.76%
Slightly Useful	6	17.65%
Moderately Useful	10	29.41%
Reasonably Useful	11	32.35%
Very Useful	3	8.82%
Mean Response	3.09	

Notes: Based on responses to Q5, "Chart as an Information Tool"

Section 3: Water Bill as an Information Tool

Table D-6. Response Frequency: Perceived Readability of Water Bill

	N	%
Not Very Easy	1	1.39%
Slightly Easy	1	1.39%
Moderately Easy	10	13.89%
Reasonably Easy	24	33.33%
Very Easy	36	50.00%
Mean Response	4.29	

Notes: Based on responses to Q6, "Water Bill as an Information Tool"

Table D-7. Response Frequency: Perceived Importance of Water Use Graph

	N	%
Not Very Important	2	2.82%
Slightly Important	1	1.41%
Moderately Important	6	8.45%
Reasonably Important	24	33.80%
Very Important	38	53.52%
Mean Response	4.34	

Notes: Based on responses to Q7, "Water Bill as an Information Tool"

Table D-8. Response Frequency: Importance of Gallons vs. Dollars

	N	%
The Gallons of Water Used per Month	55	67.07%
The Total $ Amount Due on the Water Bill	27	32.93%
Mean Response	1.33	

Notes: Based on responses to Q8, "Water Bill as an Information Tool"

Table D-9. Response Frequency: Comments on Changes to Water Bill

	N	%
12 Month water use history chart, $ rate/gallon		
A comparison to the city-wide average of all households of the same number of inhabitants		
A more extensive bar chart showing usage over the last several months would give an idea of the usage trend – better than just one month last year & the previous month.		

Add monthly rainfall amounts	
Better descriptions of fees...like, what is a 5/8" service charge? I don't understand most of them	
Having the actual bill sent sooner after meter read date.	
I like the monthly graphs – very easy to read	
I use very little water and don't see this reflected because of fixed costs in the bill	
I wish it could use comparables from others like same # people family, or at least quarterly postings + where you are compared to the "Joneses".	
I would like to see the previous 12 months displayed on the graph	
I would like to see the water use history for thee current month and the same month for the last three years	
I would like to see the water use history for the current month and the same month for the last three years.	
I'm curious about the monthly precipitation levels in Santa Fe as compared to H2O use.	
Indicate rate schedule every month.	
Lower surcharges	
Lower!	
Monthly conservation tips + a baseline (a typical family of x uses x) so I can contrast usage	
More detail on usage, but don't see how that's possible with current meter reading	
Perhaps an alert when usage average doubles or triples	
Put the rates of the Water Division on the back of the Utility Bill	
Reservoir levels – comparison to precipitation	
Show budget-based water allotment per month	
The graph enclosed In this survey is both helpful and easy to read (maybe 1-2 x/yr)	
The price per gallon go down.	
The rates charged for each 1,000 gallons of water usage	
We would like to see something like the "budget-based water allotment estimate" you provided w/this survey. We'd also like a check off box to give water to endangered species or to the Santa Fe River as suggested by Councilor Bushee.	
Total Responses	25

Notes: Based on responses to Q9, "Water Bill as an Information Tool"

Section 4: Measurement Tool

Table D-10. Response Frequency: Experience Leaks

	N	%
Yes	14	19.44%
No	58	80.56%
Mean Response	1.81	

Notes: Based on responses to Q10, "Measurement Tool"

Table D-11. Response Frequency: If Yes to Q10; Month or Months that Leaks Occurred

	N	%
March	1	
April	0	
May	1	
June	0	
July	2	
August	0	
September	2	
October	0	
November	4	
December	2	
January	3	
February	1	
Total	16	

Notes: Based on responses to Q11, "Measurement Tool"

Table D-12. Response Frequency: Experience Water Use Spikes

	N	%
Yes	26	36.11%
No	46	63.89%
Mean Response	1.64	

Notes: Based on responses to Q12, "Measurement Tool"

Table D-13. Response Frequency: If Yes to Q12; Month or Months that Spikes Occurred

	N	%
March	1	
April	2	
May	8	
June	8	
July	13	
August	4	
September	3	
October	2	
November	4	
December	7	
January	4	
February	2	
Total	58	

Notes: Based on responses to Q13, "Measurement Tool"

Table D-14. Response Frequency: Attitude about Detecting Problems

	N	%
Yes	46	65.71%
No	24	34.29%
Mean Response	1.34	

Notes: Based on responses to Q14, "Measurement Tool"

Table D-15. Response Frequency: If Yes to Q14; Comparison of Problem Detection with Current System

	N	%
Yes	36	72.00%
No	14	28.00%
Mean Response	1.28	

Notes: Based on responses to Q15, "Measurement Tool"

Section 5: Personal Choice

Table D-16. Response Frequency: Personal Choice Options

	N	%
Wash Car at Home		
Yes	23	32.39%
No	48	67.61%
Mean Response	1.68	
Plant Grass Seed or Sod		
Yes	10	14.08%
No	61	85.92%
Mean Response	1.86	
Plant Trees or Shrubs		
Yes	27	38.57%
No	43	61.43%
Mean Response	1.61	
Water Different Days than Allowed		
Yes	63	88.76%
No	8	11.27%
Mean Response	1.11	
Water More Often than Allowed		
Yes	24	34.29%
No	46	65.71%
Mean Response	1.66	

Notes: Based on responses to Q16, "Personal Choice"

Section 6: Accommodate Landscape Watering

Table D-17. Response Frequency: Understand the Bell Shape Curve

	N	%
Yes	64	90.14%
No	7	9.86%
Mean Response	1.10	

Notes: Based on responses to Q17, "Accommodate Landscape Watering"

Table D-18. Response Frequency: More Familiar with Bell Shape Curve

	N	%
Yes	42	60.00%
No	28	40.00%
Mean Response	1.40	

Notes: Based on responses to Q18, "Accommodate Landscape Watering"

Table D-19. Response Frequency: Degree of Understanding Changes in Water Use Base Line (Beginning)

	N	%
Not At All Confusing	42	60.87%
Not Very Confusing	12	17.39%
Slightly Confusing	9	13.04%
Moderately Confusing	4	5.80%
Very Confusing	2	2.90%
Mean Response	1.72	

Notes: Based on responses to Q19, "Accommodate Landscape Watering"

Table D-20. Response Frequency: Degree of Understanding Changes in Water Use Base Line (End)

	N	%
Not At All Confusing	48	70.59%
Not Very Confusing	12	17.65%
Slightly Confusing	5	7.35%
Moderately Confusing	1	1.47%
Very Confusing	2	3.94%
Mean Response	1.49	

Notes: Based on responses to Q20, "Accommodate Landscape Watering"

Table D-21. Response Frequency: Watering Methods

	N	%
Water by Hand Held Hose		
Yes	63	88.73%
No	8	11.27%
Mean Response	1.11	
Water by Hose-end Sprinkler		
Yes	24	33.80%
No	47	66.20%
Mean Response	1.66	
Water by Drip System		
Yes	27	38.03%
No	44	61.97%
Mean Response	1.62	
Water by Underground Spray System		
Yes	1	1.41%
No	70	98.59%
Mean Response	1.99	
Water by Automatic Sprinkler System		
Yes	4	5.63%
No	67	94.37%
Mean Response	1.94	
Flood Irrigation		
Yes	1	1.41%
No	70	98.59%
Mean Response	1.99	
Use Gray Water		
Yes	33	46.48%
No	38	53.52%
Mean Response	1.54	
Use Harvested Water		
Yes	46	64.79%
No	25	35.21%
Mean Response	1.35	
Use Soaker Hose		
Yes	5	7.46%
No	62	92.54%
Mean Response	1.93	

Notes: Based on responses to Q21, "Accommodate Landscape Watering"

Table D-22. Response Frequency: Suggestions for Calculating Outdoor Allotment

	N	%
A small allotment for dry winter weather is probably useful, and May might be one of the highest need months for gardeners.		
Allotment should be on a sliding scale based on rainfall (or lack of it). Last July was very hot and dry with little or no precipitation; therefore, it took more water to keep things alive. The outdoor allotment should be greater in dry months.		
Allotments for winter watering in very dry years!		
Concern that high water allotment might encourage increased planting or use outside H2O.		
Consideration for landscape watering 1-2/mo. In dry winter months (Jan-Feb)		
I believe that homeowners with larger properties need a more flexible allotment. Lets face it, with a 1.3 acre lot on the east-side my outdoor watering needs are greater than someone owning a 1/1o acre lot in Tierra Contenta. Yes, we are ?? equally under the allotment system.		
I have only xeric plants and water exclusively by drip emitters, but under all circumstances appear to use more than my allotment in the summer (budget or schedule based). How is the allotment determined? Are most people able to adhere to the allotment?		
I see no need to differentiate – in fact it could be an annual allotment per person with #s over ? to get less PP		
I think the outdoor allotment should be more conservative to encourage xeriscape and more drought tolerant trees and shrubs etc.		
I think there should not be an allotment. The rate structure should specify a certain usage then the rate goes up if you use more. If you use many gallons the rate structure is out of sight.		
I would suggest adding a small amount of water to the winter month allotment. Sometimes the winters here are so dry, you have to water your yard to keep it alive.		
Looks good to me		
Lower rainfall, of course, complicates the estimate		
Make it much less, 7000 gallons is ridiculously high.		
Meter reading is not reliable, therefore how can calculations be accurate. There are inaccuracies on our Oct. to Dec. bill that have yet to be resolved. We did not use the amount recorded and billed.		
Note one example: My water meter was read Sept. 2 but the period covered was 29/31 in August. However, I was only allotted the September amount. This did not seem fair to me. I think the allotment per month should be used to pro-rate the allotment for any given customer, depending on their read-date, i.e. in the above case my allotment should have been based on the formula 29/31 of Aug. allotment and 2/30 of Sept. allotment.		
Only an individual residence analysis could give you that number for a min/max usage. This could be a fee based service offered by the water company to participating in a BBWA if it becomes real. I think every residence regardless of size should be given some maximum # of trees, # of bushes and sq footage of planted area to determine a universal BBWA for outside use.		
Only to keep in mind that landscaping contributes to air quality and the community. We don't need lawns but we do need trees. During dry winters wee still need to water to keep our trees alive.		
Pets should be included. My big dogs drink a lot of water, for instance.		
Ratio of lot size to dwelling size.		
The assumption that watering is not necessary in the winter months is not correct.		

	Warm and dry years, like this one, do require some winter watering.	
	The target numbers seem fair.	
	There should be an agricultural allotment for vegetable gardens and fruit trees. Gardeners are saving water by using more careful practices than large-scale farms and are also saving fossil fuels.	
	Water saved in one month could become surplus to be used in other months (like bank account).	
	Yes for us a yearly allotment makes more sense than a monthly allotment, for we had, and would like to have again, a vegetable garden. Let us decide how to use our allotment.	
	Total Responses	25

Notes: Based on responses to Q22, "Accommodate Landscape Watering"

Section 7: Indoor Component

Table D-23. Response Frequency: Exceed Allotment November through February

	N	%
Yes	21	29.17%
No	51	70.83%
Mean Response	1.71	
If Yes, Which Months?		
November	8	23.53%
December	15	44.12%
January	8	23.53%
February	3	8.82%
Mean Response	2.18	
November		
Yes	8	11.11%
No	64	88.89%
Mean Response	1.89	
December		
Yes	15	20.83%
No	57	79.17%
Mean Response	1.79	
January		
Yes	8	11.11%
No	64	88.89%
Mean Response	1.89	
February		
Yes	3	4.17%
No	69	95.83%
Mean Response	1.96	

Notes: Based on responses to Q23, "Indoor Component"

Table D-24. Response Frequency: Outdoor Watering during November through February

	N	%
Yes	44	61.11%
No	28	38.89%
Mean Response	1.39	
If Yes, Which Months?		
November	30	23.26%
December	28	21.71%
January	30	23.26%
February	41	31.78%
Mean Response	2.64	
November		
Yes	30	41.67%
No	42	58.33%
Mean Response	1.58	
December		
Yes	28	38.89%
No	44	61.11%
Mean Response	1.61	
January		
Yes	30	41.67%
No	42	58.33%
Mean Response	1.58	
February		
Yes	41	56.94%
No	31	43.06%
Mean Response	1.43	

Notes: Based on responses to Q24, "Indoor Component"

Table D-25. Response Frequency: Type of Appliances and Fixtures in the Home

	N	%
1.6 Gallon per Flush Toilet	60	32.79%
3.5 Gallon per Flush Toilet	8	4.37%
The Older 5 or more Gallon per Flush Toilet	5	2.73%
High-Efficiency Washing Machine	20	10.93%
Water-Saving Dishwasher	27	14.75%
Low-Flow Showerhead	49	26.78%
Swamp Cooler	7	7.10%
Other:	1	0.55%
Mean Response	3.82	
1.6 Gallon per Flush Toilet		
Yes	59	83.10%
No	12	16.90%
Mean Response	1.17	
3.5 Gallon per Flush Toilet		
Yes	8	11.27%
No	63	88.73%
Mean Response	1.89	
The Older 5 or more Gallon per Flush Toilet		
Yes	5	7.04%
No	66	92.96%
Mean Response	1.93	
High-Efficiency Washing Machine		
Yes	21	29.58%
No	50	70.42%
Mean Response	1.70	
Water-Saving Dishwasher		
Yes	27	38.03%
No	44	61.97%
Mean Response	1.62	
Low-Flow Showerhead		
Yes	50	70.42%
No	21	29.58%
Mean Response	1.30	
Swamp Cooler		
Yes	13	18.57%
No	57	81.43%
Mean Response	1.81	

Notes: Based on responses to Q25, "Indoor Component"

Table D-26. Response Frequency: Suggestions for Calculating Indoor Allotment

	N	%
1,000 gallons per person		
Again, the usage readings must be accurate.		
Allow for winter watering in drought years.		
Annual discretionary allotment (1000 gal) that could be applied to specific occasions, such as holiday guests.		
I appreciate that you make extra allowance for people with disabilities. People with arthritis for example, get great relief from soaking in hot water.		
If there are verifiable extenuating health reasons, some increase in indoor allotment should be considered.		
If you have guests that stay over 4-5 days, water consumption is higher. How do you adjust for that?		
It should be based on family size.		
It should be lowered.		
Make allotment more in December. We cook and wash more dishes. Plus we are home more during the day, thus we use more water than in November, January, February.		
Our usage increases significantly with house guests. Need some adjustment for guests staying over 1 week.		
Seems right on!		
Yes, my allotment (I thought) was 1700 gallons, total. I'm one person in the house – not two. Two people should have, I believe, twice that, or nearly twice 1700.		
Total Responses	13	

Notes: Based on responses to Q26, "Indoor Component"

Section 8: Advantages/Disadvantages

Table D-27. Response Frequency: Perceived Fairness of Water Allotment System

	N	%
Not Very Fair	2	2.78%
Slightly Fair	4	5.56%
Moderately Fair	5	6.94%
Reasonably Fair	16	22.22%
Very Fair	45	62.50%
Mean Response	4.36	

Notes: Based on responses to Q27, "Advantages/Disadvantages"

Table D-28. Response Frequency: Perceived Incentive to Save Water

	N	%
No Incentive At All	7	10.00%
Slight Incentive	6	8.57%
Moderate Incentive	17	24.29%
Reasonable Incentive	18	25.71%
Very High Incentive	22	31.43%
Mean Response	3.60	

Notes: Based on responses to Q28, "Advantages/Disadvantages"

Table D-29. Response Frequency: Perceived Awareness of Water Use

	N	%
No More Awareness	10	14.08%
Slightly More Awareness	12	16.90%
Moderately More Awareness	11	15.49%
Reasonably More Awareness	22	30.99%
Much More Awareness	16	22.54%
Mean Response	3.31	

Notes: Based on responses to Q29, "Advantages/Disadvantages"

Table D-30. Response Frequency: Perceived Awareness of Monthly Water Use

	N	%
No Awareness At All	14	19.72%
Slight Awareness	4	5.63%
Moderate Awareness	14	19.72%
Reasonable Awareness	22	30.99%
More Awareness	17	23.94%
Mean Response	3.34	

Notes: Based on responses to Q30, "Advantages/Disadvantages"

Table D-31. Response Frequency: Perceived Benefit Associated with Landscape

	N	%
No Benefit At All	1	1.52%
Slight Benefit	5	7.58%
Moderate Benefit	8	12.12%
Reasonable Benefit	17	25.76%
Great Benefit	35	53.03%
Mean Response	4.21	

Notes: Based on responses to Q31, "Advantages/Disadvantages"

Table D-32. Response Frequency: Preference of Restrictions vs. Personal Choice

	N	%
No Water Budget and Water Restrictions	3	4.41%
Water Budget and Personal Choice	65	95.59%
Mean Response	1.96	

Notes: Based on responses to Q32, "Advantages/Disadvantages"

Section 9: Water Conservation Services

Table D-33. Response Frequency: Awareness of Water Conservation Assistance

	N	%
Yes	46	64.79%
No	25	35.21%
Mean Response	1.35	

Notes: Based on responses to Q33, "Water Conservation Assistance"

Table D-34. Response Frequency: If Yes to Q33; Request Literature

	N	%
Yes	13	28.26%
No	33	71.74%
Mean Response	1.72	

Notes: Based on responses to Q34, "Water Conservation Assistance"

Table D-35. Response Frequency: If Yes to Q33; Request Leak Detection Help

	N	%
Yes	3	6.52%
No	43	93.48%
Mean Response	1.93	

Notes: Based on responses to Q35, "Water Conservation Assistance"

Table D-36. Response Frequency: If Yes to Q33; Request Assistance with Outdoor Irrigation

	N	%
Yes	1	2.27%
No	43	97.73%
Mean Response	1.98	

Notes: Based on responses to Q36, "Water Conservation Assistance"

Table D-37. Response Frequency: Contact Water Division Concerning Demonstration Program

	N	%
Yes	23	32.39%
No	48	67.61%
Mean Response	1.68	

Notes: Based on responses to Q37, "Water Conservation Assistance"

Table D-38. Response Frequency: Contact Water Division Concerning Water Bill

	N	%
Yes	11	15.49%
No	60	84.51%
Mean Response	1.85	

Notes: Based on responses to Q38, "Water Conservation Assistance"

Table D-39. Response Frequency: Contact Water Division Concerning Water Use

	N	%
Yes	8	11.27%
No	63	88.73%
Mean Response	1.89	

Notes: Based on responses to Q39, "Water Conservation Assistance"

Table D-40. Response Frequency: Suggestions for Services or Assistance

	N	%
A meter that we as a customer can read to monitor our use – like gas gauge on car		
Advice on gray water harvesting – are there sources of material for water harvesting systems when there is little or no rain or snow.		
Correct billing – at the beginning of the program there were several months of late bills. I was billed for 2 months at a time.		
Have a program to help use gray water.		
Help with gray water		
I thought the outdoor water use audit was great!		
I was not aware of the "site visits" option for leak detection...so greater info on services. And maybe incentive programs of some kind.		
I would also like to purchase (at a reasonable cost) an inline meter to record my external usage.		
I would like to see my water use in real time. Some type of wireless connection I could view on my laptop.		
I would like to see some of the metering systems used in Europe made available here – in the kitchen is a meter showing the total amount of water used so far for the current month & the rate it is being used right now.		
Knowledge of their existence and services offered.		
Maybe you should notify people if you detect an unusual spike in their usage that may indicate a leak.		
More bill inserts promoting conservation & environmental impacts of water use. Make city-wide PSAs, radio spots etc.		
More gray water and cistern assistance. Our hose siphon is great, but we would like a more carefree system but simply cannot afford it. Sometimes it seems only the rich can afford to save water.		
More workshops on water harvesting, drip irrigation & especially gray water use. Tools for measuring outdoor water use.		
Move the meter from underground to above ground so I can use it to read usage.		
On site visits to help me plan how to organize a more pleasant low water landscape. More hands on help.		
One complete and clear list of all incentives, assistance programs, etc. for your water customers.		
Over the phone pay w/check credit card.		
Reinstate rain barrel subsidy		
Should develop a larger system of rebates similar to the one used in Albuquerque i.e., credit on water bill for removing sod and xeriscaping.		
The hose timer is invaluable. This will prevent further watering accidents. Providing these and rain barrels are great for conservation.		
Water is our most precious natural resource here. No effort should be spared in: a) rewarding conservation & penalizing over-consumption, b) planning that enforces "living within our water means"		

We need to work on grey water use & rainwater collection throughout the city.	
When usage appears higher than yearly average month to month, the calculation (reading) should be re-verified.	
Total Responses	25

Notes: Based on responses to Q40, "Water Conservation Assistance"

Section 10: Voluntary Participation

Table D-41. Response Frequency: Main Reason for Participating

	N	%
Because I have always been a strong proponent of water conservation and I hoped this experiment would contribute to greater awareness.		
Budget based water allotment seems more enforceable and gives the customer more flexibility.		
Choice of days to water		
Curious to see how much water we use and how much water we are allowed to use in our budget for comparison		
Demonstrating that choice in water use is better than laws.		
Dislike for restrictions on how & when I use my water.		
Fair allotment for family of five		
Find our average H2O sue and to maintain right to use h2O according to personal choice.		
Flexible watering days		
For the choice of how and when to use the water		
Freedom from arbitrary restrictions, personal choice of when & how to use water		
Freedom of choice for water usage		
Freedom to water. Actually watered less because I didn't have to use my 3 days allocated if I didn't need it.		
H2O on days that are convenient to me.		
Help learn how to save/economize H2O & liked the idea of more choice as to how & when to water outside.		
I am very interested in Santa Fe's water use.		
I believe in it to wash my car which I only die 4 x all year but I knew I could if I wanted to!		
I believe it is a good idea and that the city should adopt it.		
I had intended to have a garden, and see how the plan worked.		
I hand water my xeriscape garden and work on my scheduled watering days. Being able to water on my days off is much more convenient.		
I have a disability, am a single parent and work. I need to water my yard whenever I can find the time and strength, not on someone else's schedule – that way I don't over soak.		
I have a household of 8 people.		
I hoped to get some data on my water use. Assess the credibility of the Demo Program.		
I jumped at the chance to participate in the budget-based program; because I wanted to finish a landscaping project I had begun years earlier, and which I had had to put on hold for years, because it would require daily watering at first.		
I like the flexibility of watering when I think it is necessary/convenient.		
I liked the idea of being able to water on days when I had time to do it. Also to use		

water for purposes outside those allowed in the restrictions – though we never did.

I think water allotment is a good idea. If a family is willing to use their water sparingly they should be able to use it when and how they deem appropriate. I wanted to know if it would work and that is shy I signed up.

I want flexibility in when I use water wisely.

I wanted to be able to choose how and where to save water. I like to make sacrifices to keep my plants alive.

I wanted to be involved in a program that could assist in our water problems and solutions.

I wanted to demonstrate a low water use household…know that our use data was being collected.

I wanted to show support for the program even though I knew my usage was already low and my awareness of the situation was high.

I was a member of the Water Conservation Program

Interest

Interest in creating/being a part of an incentive driven water conservation program for the City.

Interested in water-saving techniques

It (the water budget) seemed a good idea & we wanted to see how it would work for us.

More choice. Desire to help the City make good policy decisions.

My main reason for participating was to see if I could do it!

My past water use indicated I was a fit for the program. I like the lack of restrictions associated with the current stage.

Personal choice as to when and how to water landscape

Personal choice of water use, better assessment of water use

Personal choice when I water is very important!

Prove that this system (personal responsibility & allotment) is preferable.

So that the City can determine a per-household amount to be used

The ability to use water in whatever way I wished

Thought anything was better than the current system.

To be able to do landscape watering when we wished without breaking water laws.

To be able to water our garden on any day we wished. Our use was already relatively low, and we resent being told when to water.

To be able to water when I need to. Before I would water on my days even if it didn't need it, because next watering day was to long. I work & some of my watering days I just couldn't water.

To be able to water without concern for day of week

To demonstrate our water use responsibility, and to be able to water a small garden when it was needed. Plants don't understand days of the week.

To do away with arbitrary restrictions and manage our own conservation

To get a larger water allotment based on having a large family.

To have the freedom to water outside when I wanted

To help our community save water

To help Santa Fe

To help the City develop the program & to simplify my water usage

To not have the restrictions on which day I could water. Those are ridiculous.

To restrict the amount of water we use. To use as needed, not on certain days (the

wife)	
To see how our usage compared to others and to see if we could easily fit within the allotment.	
To see how well it would work for us.	
To show the City Counsel that consumers should be allowed to determine how to use water and not be dictated too.	
To track my water use	
To use the water however I wanted when I wanted to.	
To use water the way we choose.	
Water in days other than allowed in Stage 2.	
We are very interested in the water problems in Santa Fe - we have never had an abundance of water - 50 year & lifetime resident.	
We strive to conserve water daily and used this as validation that we do not have to exceed allotment and can still use water as we prefer to.	
We wanted to help determine a plan that works for consumers and the utility.	
With a large family, I was anticipating a greater allowed water use.	
Total Responses	71

Notes: Based on responses to Q41, "Voluntary Participation"

Table D-42. Response Frequency: Opt Out Early if Allowed

	N	%
Yes	0	0.00%
No	70	100.00%
Mean Response	2.00	

Notes: Based on responses to Q42, "Voluntary Participation"

Table D-43. Response Frequency: If Yes to Q1; Comments Concerning Leaving Early

	N	%
No responses		
Total	0	

Notes: Based on responses to Q43, "Voluntary Participation"

Section 11: Feedback

Table D-44. Response Frequency: Interested in Future Water Allotment Rate Structure

	N	%
Yes	67	98.53%
No	1	1.47%
Mean Response	1.01	

Notes: Based on responses to Q44, "Feedback"

Table D-45. Response Frequency: Comments about the best liked part of the Program

	N	%
A larger water allotment		
Ability to see actual water usage		
Ability to use our water (indoor & outdoor) as we needed it.		
Allotment water on any day as needed for plants to survive.		
Being able to select the days I could water and the how I could use my allotment		
Being able to water on days not assigned because I could adjust my use to the weather		
Being able to water when I needed to		
Can wash the car anytime		
Car wash + day flexibility – we wanted less cuz I knew we could water anytime		
Choice to use H2O as we needed, or desired		
Could water different days of the week		
Ease of use.		
Eliminating arbitrary restrictions of days/week		
Flexibility (2 responses tallied)		
Flexibility in water use		
Flexibility of watering on any day. Recognition that we can and do conserve water well even with flexibility.		
Flexibility on when I water outdoors & the graph you sent of yearly use for past 3 yrs.		
Flexibility, simple (no hassling from City)		
Flexible outdoor watering days		
Free use of water		
Freedom		
Freedom of choice		
Freedom of choice for landscape water usage		
Freedom to choose how I use water		
Freedom to choose. Also it allowed me to water according to the dictates of nature.		
Freedom to water outside when I wanted		
Freedom		
Friends and neighbors saw the sign and asked. Maybe they thought about their own use.		
I could wash my car by hand. I only use a few gallons of water. I wet, wash and then rinse. I use a nozzle on my hose, so I don't let water run.		
I liked being able to wash my car without having to go to a costly & wasteful car wash. I use a bucket rather than a hose, so it only takes 4 gallons.		
I think it raises people's awareness.		
It brought awareness and information to my neighborhood, educational		
It is our City trying to save water.		
It required constant vigilance, and I believe everyone should be required to take pains to conserve water, a scarce resource here.		
It works!		
Making own choices about H2O		
No restrictions on watering days		
Personal choice (2 responses tallied)		

That I could water plants/grass etc. when they needed it.	
That I water any day without having to worry about being fined.	
That we could water landscape when we felt we needed to	
The ability to make personal choices	
The choice of when to use water	
The concept behind it	
The feeling of freedom to maintain our landscape any day of the week	
The freedom to maintain my few remaining shrubs & trees when I can rather than on an artificial schedule.	
The freedom to water on any day. Business, school, and civic activities don't easily allow people to water on set days.	
The freedom to water when I had time to do it rather than conform to odd/even address day	
The freedom to water when I want and how I want	
The freedom to water when needed not a fixed schedule.	
The indoor and outdoor estimates reflect my water use except for the warmer months when my outdoor use is usually half of the demonstration estimates.	
The mere fact that Santa Fe created this program in the first place. But I feel this is just the beginning of more intense efforts to raise the consciousness of the citizens of Santa Fe.	
The sign in front of my house. Several people asked about it.	
This survey & the site info report that came with it.	
Water when needed	
Watering when convenient rather than rigid schedules	
We are very conservative in our water use. We appreciate the opportunity to choose when to water trees and plants. I do think it is helpful for people to see their water usage compared with other homes with similar numbers of occupants	
We could water our garden when we wanted to and get credit for using less water indoors that we could apply to use outdoors.	
You considered the # of people in the household.	
Total Responses	60

Notes: Based on responses to Q45, "Feedback"

Table D-46. Response Frequency: Comments about the least liked part of the Program

	N	%
A somewhat strict rules to keep in mind and detail oriented.		
All the reading; an over-budget on my 1 person household = not too accurate & too generous		
Bills weren't tailored to the program		
Filling out this form		
I began being charged at a higher rate when I started the program.		
I did not get a rate differential for months that I used less than my "allotment"		
I did not need the sign		
I think you should have an outdoor watering allotment even in December & January if it is a very dry winter.		
It was a very efficient program however, I wish there had been more radio spots to inform people about it – like on public radio – 6 – KSFR -		
It's coming to an end. (Well actually, to tell the truth the pressure is off and that is a		

relief, although the habit of conserving water continues).	
Knowing the requirements of the program and your past water use, gives you the chance to join the program if you are a fit for it. If not, I guess you would have some dislikes about it.	
No sliding scale for large lots with native landscaping	
Not specific to this demo program, but not being able to track H2O meter myself.	
Nothing (2 responses tallied)	
Nothing comes to mind	
Nothing, although I was somewhat embarrassed by the sign as I felt it made me into a self-righteous water saver.	
Our sign was stolen from the front yard.	
Sign in yard + extra charges for going over allotment since we still use less than most	
Still couldn't water before 6:00 pm.	
That I was never contacted by person to discuss & explain my water usage	
That there…credit…for under use of water. However, I understand shy – the goal is to save water.	
That we are in such a drought! And the building keeps going crazy.	
The amount allowed – if you look at my average use it was within approx. 1000 gals. But I still went over Dec. and Jan.	
The gifts	
The mystery surrounding how much water we were going to use each month.	
The requirement to submit personal information in order to confirm the number of people residing in the household. Submitting personal information is always a concern nowadays.	
The sign – we didn't use it	
The sign in our yard	
There should be some kind of periodic exception for old housed that spring leaks.	
Unreliability of the usage amounts considered during the test period.	
When we had family and guest staying with us, I was concerned we may go aver out allotment – but we didn't.	
Winter allocation assumptions	
Total Responses	32

Notes: Based on responses to Q46, "Feedback"

Table D-47. Response Frequency: Suggested Changes Concerning the Demonstration Program

	N	%
Allotment to protect trees in dry winter		
Allowed amount increased in Nov. Dec. Jan. Feb.		
As someone said at our first meeting, if a customer does not use his/her monthly allotment is there an added benefit…lower water bill? Bonus?		
Consider again the early detection of leaks		
Develop a sliding scale for large lots. Beautifully landscaped quality properties enhance the city's image as an attractive place to live.		
I would have gone over an overall review w/the customer.		
I would like to see an outside allotment for all 12 months. During the winter root growth is taking place and some watering is required.		
In the bill each month provide a sheet like that enclosed with this survey. Provide a tool w/which to measure gallons used at each water tap outdoors.		

Including info on allotment amounts in monthly bills (also – the sign in the yard)	
Increase landscaping allotment.	
Keep the focus – but simply process. (structure)	
Lower the allotments!	
Make it a city-wide program	
Make it better known – a city wide campaign.	
Make it mandatory to participate! Fat chance, eh?	
Make it permanent	
Maybe have a consolidated & easier list of goals & easier description of project.	
Not need the signs	
Nothing (6 responses tallied)	
Nothing – it was a good program	
Nothing I can think of for the moment – perhaps greater participation if it is not too costly.	
Nothing in particular	
Possibly having a water meter that we could read throughout the month	
Small allowance for landscaping in winter.	
Solicit more ideas from consumers, have a neighborhood competition for average consumption rates. Perhaps get much tougher on homes with more bathrooms than are reasonable.	
The high allotment amount	
There should be much higher charges for going over the allotted amounts.	
To be really fair you need to adjust allotment based on read date.	
Up the allotment in December	
When we are under our allotment we should be rewarded.	
You must review sharp increases in use promptly. If cause is not a leak, then what is? Follow up on customer inquiry about bill irregularities.	
Total Responses	36

Notes: Based on responses to Q47, "Feedback"

Table D-48. Response Frequency: General Comments Concerning the Demonstration Program

	N	%
Extend program at least on a voluntary basis for those who stay within allotments.		
Good idea. Perhaps a quarterly interaction during the year would have kept everyone involved and aware of the purpose. Thank you for the opportunity.		
Good job		
High rates for every water user above a certain amount. Low rates for basic allotment.		
Higher fines for those that over run allotment.		
How are the allotments calculated?		
I applaud this first cohesive effort. But still most of the people of Santa Fe seem quash – oblivious about how dire the water situation is.		
I appreciated being a participant. It made me check faucets and listen for leaks, also really keep track of use. Thank you.		
I don't think we are the best household to use as reference points because of our landscape needs (I may be mistaken). But, having a budget for total usage makes sense and could raise awareness in general. I'd like follow up info on your results for		

the whole project.

I think it was a great program and I think the allotment was plenty.

I think we should not be so heavily restricted w/our water usage. I think we should pay over the norm if we go over the norm.

I was always irritated by the prohibition against car washing as I use very little water for washing my car, and I gather from newspapers that car washing places do not always recycle water. I also feel that it is sometimes absurd to water on allotted days when weather patterns are so changeable. Apparently public awareness of water problems has reduced water consumption. I only wish it would have the same effect on city government practices regarding development.

I would just like to say I whole-heartedly support the water budget. It is much fairer and easier to monitor than telling people when to water. If I want to take two-minute showers and water my garden every morning, that should be my business, and I shouldn't have to worry about the water department staring over our wall. The city should also explore promoting composting toilets. Ours seems to save about 800 gallons a month - and our trees appreciate the compost.

I would love to see a discount or rebate for people who use less than their allotment. It doesn't have to be large. Even a small discount per gallon would encourage people to use less water. Maybe the less water a household uses the greater the discount.

I'd just like to see programs that encourage water reuse, like grey water & rainwater collection, multi-flow systems & so on, and ways to make them more attainable for the average Santa Fe resident.

I'd like to see more refunds for retrofits particularly for BIG water tanks for rainfall/snow runoff and gray water plumbing.

If I could read my own meter, I could keep track of daily use (24 hrs) or even day time vs. night time use. If that makes a difference to water availability.....don't know - Don't know how my use compares to other 1 person households.

If this program has had a positive effect on saving H2o for the community, it should be implemented as a required program and include commercial services...developers.

If this program is implemented full time I would like to see the full yearly allotment at the start of the program, allocated for a full year instead of monthly allocation. This would avoid monthly overages when large numbers of family visit or extremely hot weather when more watering is needed.

It is a great program and the City needs to adopt it as part of their rate structure.

It makes sense to give every household an allotment, adjusted monthly, and allow them to use that amount as they wish, with no outside control, but to have surcharges for exceeding the allotment.

It's a good idea. Thank you.

Make full use of the internet by putting as much information as possible on the City of Santa Fe website. Residents would benefit by having an explanation of the Demonstration Program and the results of the year-long study. In my opinion, there cannot be too much information available on the website.

Please come pick up our sign!

Please create a city-wide water budget!

Please, Continue!

Really liked the program. It should be system wide.

Thank you all for all you are doing & encourage Santa Fe to use less water. And please...let's only build when we have adequate H2O for each new building! So far we don't know how to make water so can only use what we have!!

Thank you for the opportunity to participate in this program.

Thank you for the program.	
Thank you for this opportunity. Water is a precious resource.	
Thank you for trying new things. Note that water use can be much lower than the allotment. Our average (198 gal/day) included a major hose mishap and another mishap within the allotment period. Hose timers and rain barrels work. Incentives for low use may work too (ask local businesses to get in on it - SFBCA)	
Thanks so much for doing this Demo Program! It's one more piece of the solution puzzle…	
Thought the signs were a good idea because my neighbors asked about the water budget program - helped to spread the word and create discussion amongst my neighbors. Think it would be a great idea to feature several participants in a newspaper story to show how well they did or did not do - as far as sticking to the budget.	
Tweaking, tweaking the program always helps. Thank you for the opportunity to participate.	
Very wet winter (Jan. - Mar. 05) probably reduced outdoor watering needs compared to normal year (and allotment) should allow some outdoor use in winter.	
We enjoyed participating and wish we could continue now.	
We liked it. It worked for us and we didn't feel like the city was micromanaging our water use choices, yet we were able to use less water than the budget without too much problems.	
We wish it were still going on.	
We would be happy to participate in related conservation studies.	
While I like the idea, I foresee a multitude of implementation challenges - like tracking the number of residents, providing quick response to bill concerns & the like.	
Would like to participate again to make further comparisons	
Total Responses	42

Notes: Based on responses to Q48, "Feedback"